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ECONOMIC AND INDUSTRIAL AFFAIRS

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6 June 1983

EAST EUROPE REPORT

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CZECHOSLOVAKIA

BRIEFS

MINE DISASTER DEATHS REPORTED--Mine rescue teams under the direction of state and economic bodies continue cleanup operations at the Czechoslovak Army Mine in Karvina, the site of the 27 April 1983 mine disaster. Nine of the 11 miners buried underground were found dead and the two survivors have been hospitalized. An investigation commission composed of experts from the Federal Ministry of Fuels and Power, the Czechoslovak Academy of Sciences, the College of Mining in Ostrava, the Scientific and Research Institute of Coal and the general management of the Ostrava-Karvina Mines has been established under the direction of the State Administration of Mines to investigate the cause of the disaster and to increase safety in mines endangered by mountain tremors. [Prague PRACE in Czech 23 May 83 p 3]

CSO: 2400/292

GERMAN DEMOCRATIC REPUBLIC

ECONOMICS CHIEF OUTLINES NEW COMBINE RESPONSIBILITIES

West German Commentary

Bonn INFORMATIONEN in German No 6, Mar 83 pp 11-12

['Background' report by FRG Ministry for Inner-German Relations: "GDR Combines to Produce More." A translation of Guenter Mittag's speech at the Leipzig seminar, cited below, follows this commentary]

[Text] The combines in the GDR plan to raise labor productivity this year by one percent above plan targets and manufacture an excess industrial commodity output at a clip of M 3.8 billion, meant to benefit in particular the public consumer supply and export. That was the commitment assumed by the representatives of the 222 GDR combines meeting in Leipzig for a two-day seminar at which SED Politburo member Guenter Mittag, Central Committee secretary for economic affairs, delivered a keynote speech. In it he quoted from a thus far unpublished Politburo resolution containing "new official plan figures" in terms of which these enterprises have to organize their work.

The conference was attended mainly by the management personnel of the 156 centrally managed combines of industry, construction, transportation and communication and of the 66 bezirk-managed industrial combines including the general directors and party organizers.

The seminar also was attended by all party and state functionaries responsible for the GDR economy. That included

- the competent department chiefs of the SED Central Committee;
- the various departmental ministers of the Council of Ministers responsible for economic affairs;
- other heads of central state and economic organs;
- the SED bezirk management secretaries responsible for economic affairs; and
- the members of the presidium of the FDGB National Executive Committee.

Mittag called on the competent combine functionaries in his speech to make their contribution through fulfilling their management activity according to plan "to put the economic strategy for the 1980's into action and thus fulfill and exceed in a targeted manner the tasks assigned in the 1983 national economic plan."

To be able to control each combine's performance in fulfilling these tasks, this party functionary, who is responsible for GDR economic affairs, announced for the future a "performance comparison of all combines." Mittag said: "And this is not merely a comparison of figures. What mainly matters is to show by means of an experience exchange how science and technology are applied successfully, how material, energy and raw materials are used better and more highly refined, how costs are reduced and labor productivity is raised. The point is to indicate ways for still more efficiently using all intellectual and material potentials."

More Commodities for the Population

In this context Mittag emphasized that it was of crucial importance to "come up with far more products and achievements for the population and vary still more the assortments of industrial consumer commodities." That applied "to all combines and enterprises, including those that manufacture the means of production" and was "a task concerning everyone, without any exception."

Altogether the point was "to utilize all intensification factors to the fullest so as to make the cost/benefit ratio still much more favorable and increase economic efficiency and labor productivity faster still than before." All this should have to be done "on the basis of the state plan and the combines' and enterprises' own responsibility."

Then Mittag commented on a new, thus far unpublished, SED Politburo resolution setting down "measures for further perfecting management, planning and economic cost accounting." It had settled the accountability of the general directors of the combines "for the streamlined management of the entire reproduction process." The "alpha and omega of the general directors' precise management activity" was "to control not just particular aspects and sectors but the entire reproduction process."

The Politburo resolution also reiterates, according to Mittag, "that central state planning is the decisive basis for socialist economic management." For that, the combines and enterprises were given "mandatory official plan figures" on which they had to base their work. The catalogue of these figures was expanded beyond the ones now in force in the resolution and now contains the following parameters for the development of

- industrial commodity production and the production of the building trade and the construction industry,
- labor productivity,
- net production,
- profit, and
- the production of "economically important products toward public supplies, the material-technical supplies for the economy, and for export."

The Combines' Obligations

In a letter addressed to Erich Honecker, SED general secretary and chairman of the GDR State Council, the representatives of the combines and the other competent party and state economic functionaries committed themselves to do what they can to "meet the tasks assigned to us in improving the material and financial balances."

They furthermore assumed the obligation to exceed the 1983 plan targets in boosting labor productivity by one percent to create the prerequisites for manufacturing extra commodities, beyond the plan, at a clip of M 3.8 billion and an additional construction output at a value of M 271 million.

This extra output is to pertain mainly to products "that are of special importance for public supplies, the economy and the export." The intention is especially to "exceed by more than a billion marks" the consumer commodity production plan. The letter to Honecker contains a list of commodities the "population likes to buy" for which this money is to be spent; a few items on that list are:

- 400,000 bicycle tires,
- 24,000 radio receivers,
- 32,500 quartz watches,
- 121,000 automatic coffee and tea makers,
- 405,000 square meters of lace and other curtains,
- 270,000 pairs of shoes, and
- 600,000 drinking glasses.

Guenter Mittag's Speech

East Berlin NEUES DEUTSCHLAND in German 11 Mar 83 p 3

[Text of speech by Guenter Mittag, SED Politburo member and Central Committee secretary for economic affairs, given at SED CC seminar, Leipzig, 10 March 1983: "Combines Exchanging Experiences--Performance Comparisons Reveal Reserves: New Initiatives to Fulfill Resolutions of 10th Party Congress--Guenter Mittag Spoke at SED Central Committee Seminar in Leipzig--Intensification Is the Main Road of Our Continuing Economic Growth--Implementation of Economic Strategy, a Decisive Contribution to Strengthening the GDR and Securing Peace--Results from Science and Technology to Be Utilized More Intensively for Maximal Work Productivity"]

[Text] The follow-up tasks in the continuing implementation of our 10th party congress resolutions were presented in Comrade Erich Honecker's speech at the first kreis secretaries conference. That outlines the campaign program for fulfilling the targets set down in the 1983 national economic plan.

Many letters received by the Central Committee document how in combines and enterprises of both the centrally managed and the bezirk-managed industry a beginning has been made in focusing the work on the new requirements which Comrade Erich Honecker's speech presented to clearly and unequivocally. The realization that our most important contribution to the safeguarding of peace lies in the all-round strengthening of the GDR more and more determines the thoughts and actions of the workers, male and female, the researchers, designers and technologists, and the responsible management personnel.

The speech before the first kreis secretaries illuminates what ambitious tasks the combines in industry, construction, transportation and communication and in the bezirk-managed industry have to deal with in this respect, and they are in part completely new in character. That guideline speech sets the criteria for further efforts and, at once, shows that not only the demands have grown but the chances to cope with them as well.

Our Commitment in the Karl Marx Year

Under the conditions of the workers and farmers power in the socialist GDR, it is our duty to organize the Karl Marx Year in such a way that the advantages of socialism become still more pronounced through our strengthening the GDR in every way and combining the solution of that task with the struggle for maximal work productivity.

Karl Marx means to us the irrevocable conviction that our cause is victorious. To us it means the certitude that the workers class, led by its revolutionary party, has found in Marxism-Leninism a sound scientific theory relevant to life so we can solve with success all tasks assigned to us today and in the future.

"Marxism is marked by the unity between consistent scientific theory and revolutionary practice," Yuri Andropov, general secretary of the CPSU Central Committee, wrote in his article about the doctrine of Karl Marx. In this profound and pioneering article, Comrade Andropov, through applying the dialectics, developed the creative character of Marxism and made the point that Lenin raised Marxism onto a new and higher level.

Fulfilment and Targeted Overfulfilment of the Plan

The purpose of the seminar is to implement everywhere the tasks which Comrade Erich Honecker, general secretary of the SED Central Committee and chairman of the GDR State Council, assigned at the SED Central Committee secretariat conference with the first kreis secretaries. To us that means putting into action the economic strategy for the 1980's and thus fulfill and, in a targeted manner, exceed the tasks in the 1983 national economic plan.

We have assigned very high targets to ourselves for 1983. They contain a production growth of more than 4 percent and material savings of 9 percent. That demands great creative work from all working people. It calls for the kind of management activity that is aimed at the resolute implementation of the party's economic strategy. Only that kind of management activity, combined with extensive political-ideological work, makes it possible for us to release those capacities through socialist competition which are needed for fulfilling these great tasks.

So that each combine knows precisely where it stands with its achievements and which reserves have to be tapped, we are conducting a performance comparison in all combines. And this is not merely a comparison of figures. What mainly matters is to show by means of an experience exchange how science and technology are applied successfully, how material, energy and raw materials are used better and more highly refined, how costs are reduced and labor productivity is raised. The point is to indicate ways for still more efficiently using all intellectual and material potentials.

We have set for ourselves the task to produce high-grade goods and show still more flexibility in accordance with demands. It is of crucial importance to come up with far more products and achievements for the population

and vary still more the assortments of industrial consumer commodities. That applies to all combines and enterprises, including those that manufacture the means of production. That is a task concerning everyone, without any exception.

Using All Economic Resources for the Main Task

We have given ourselves the task to accelerate the whole production process by way of intensification and make it still more efficient. It means extensively organizing our intensively expanded reproduction in all enterprises and combines. Everywhere concrete requirements are needed for it in management, planning and economic cost accounting. And here we proceed from the basic verity in our economic development that any further economic growth presupposes higher efficiency and improved labor productivity.

Everywhere, on any job whatsoever, we must responsibly conduct our political work with the more than 3 million workers in the 156 centrally managed and the bezirk-managed combines in the state-owned industry, construction, transportation and communication.

Of crucial importance for any further advances on this road is the fact that the GDR's economy is most closely linked with the USSR economy and socialist economic integration is further deepened within CEMA.

Such purposeful and concrete efforts will help further accelerate economic development in our republic. It is essential to use all economic resources in our economy for the main task in its unity of economic and social policy. We are continuing in successfully implementing this policy, as Comrade Erich Honecker has shown in the first kreis secretaries conference, under the conditions of the sharp international class conflict.

That is why it is so important to penetrate the entire economic process ever more deeply, as our party's economic strategy requires it. The point is to utilize all intensification factors to the fullest so as to make the cost/benefit ratio still much more favorable and increase economic efficiency and labor productivity faster still than before. That is done on the basis of the state plan and the combines' and enterprises' own responsibility, which means on the basis of democratic centralism, which we are going to strengthen further.

What then is the salient point in the continuing implementation of our party's economic strategy in the days, weeks and months ahead of us in 1983? How can we and must we cope with the new tasks?

Further Consolidating Our Fraternal Alliance With the Soviet Union

First: We must continue to do all we can to consolidate the unity and cohesion of the socialist community in conformity with the 10th party congress mission. It always has been and always remains a concern of the first importance for our party to strengthen our fraternal alliance with the Soviet Union.

We are adapting ourselves with all determination to the further tasks resulting from that. We are mainly concerned about further deepening the economic and scientific-technical cooperation with the USSR and the other countries in the socialist community. Part of that is that the economic linkage among our countries be supported more still than up to now by mutual cooperation and the exchange of products at an international top level. We pay special attention in this to a contribution to solving those tasks that have to do with the USSR's foodstuffs program and the increase in consumer commodity production.

Life, our responsibility as communists for the revolutionary world process, and the tasks for the defense of peace in an intensifying international situation literally show us day after day how much depends on the consolidation of our countries' community. It is true indeed what Comrade Yuri Andropov said recently at a meeting of working people in a Moscow enterprise: "The greater the successes we have, the stronger our economy is, and the more we advance economically, the more solid are our international positions and the more permanent becomes the peace in the world."

Second: In all our work it is necessary to proceed from the indissoluble connection between the GDR's high political responsibility for safeguarding peace in an international situation aggravated by imperialist policy and the continued consolidation of its economic capability.

There are two task of strategic significance that have to be resolved simultaneously: the full exploration of all opportunities socialism can use for the good of men and creating the external conditions needed for that by ensuring its security.

Needed Intensification Measures

Third: To implement the economic strategy for the 1980's as issued by the 10th party congress, a new decisive step is now necessary to convert the economy to intensification.

The Fifth Central Committee Session has worked out the necessary measures and criteria for it. Let me summarize them at this point once more:

--Production growth must take place on the basis of an absolute reduction of energy and material consumption. With it, the speed in reducing specific energy and material consumption must outpace that of production growth.

--Labor productivity growth must be larger than that of production. Here the growth in labor productivity must increasingly express itself in an absolute cutback in jobs.

--Labor productivity must increase faster than the value of basic assets per job. To that end the time utilization of basic assets must be vastly improved, especially by more shift assignments.

--Export income from new and qualitatively further developed products must grow faster than the allocations for science and technology.

All ten key points of the economic strategy of the 10th party congress focus on the implementation of the tasks tied to these intensively expanded reproduction criteria. That is served as much by the resolute utilization of the opportunities of the scientific-technical revolution as by the introduction of technologies based on our own construction of means of rationalization, by improving product qualities and, above all, by ways of refinement.

Refining Also Must Enhance the Volume and Quality of Consumer Commodities

All experience tells us that refining plays a key role in solving the economic intensification tasks. Refining is no emergency measure. Rather, it is the decisive means for improved qualities and efficiency. Wherever the solution of this task has been approached by that basic attitude, commensurate results have shown, in a decisive cutback in energy and material as in a great improvement in the intrinsic value and quality of products and a higher economic gain.

Refining primarily also means more mental work, intensive thought and research about how to get more out of what we have, not only in terms of quantity but, above all, in terms of better qualities. Refining calls for new design solutions, creative ideas, attractive fashions, and good construction and packaging.

This contribution for the republic must crystallize above all in producing more consumer commodities as demands require with a growing proportion of high-grade consumer commodities. This is not merely a matter of fulfilling the plan tasks but of developing an important initiative for the production of additional consumer commodities that will make a noticeable difference in economic terms.

Fourth: Science and technology have to be utilized with greater economic consistency. This way above all must we achieve an increasing performance, greater economic results, real savings in working hours, and commodity quality improvements.

We Have All We Need for a High Production Level

The development of science and technology and the extensive economic utilization of their data ought to be seen and treated everywhere as an important element of the conversion of the entire economy by way of intensification. Science and technology are not an end in themselves but a means to an end. They are an indispensable and highly effective means for promoting economic growth--provided high scientific-technical and economic tasks are assigned and their fulfilment is well organized.

In his speech before the kreis secretaries Comrade Erich Honecker clearly pointed out that the progress of the productive forces continues most dynamically at the international scale. This we have to take into account, and we do have what it takes for doing so.

The GDR is a highly developed industrial country. It has a modern economic organization on a higher socioeconomic foundation, qualitatively, than capitalism. We have experienced personnel, scientists and managers, technologists and production organizers.

In the combines we find the modern management form in industry, construction, transportation and communication that accords with our current requirements. So we actually have all that is needed to take the step now ahead of us in raising the scientific-technical production level, so that we can eliminate step by step any backwardness in the developmental level of labor productivity still existing in comparison with some industrial countries and further develop a production in line with the demands of the world market.

Effective Management, Planning and Economic Cost Accounting

Fifth: In his speech before the first kreis secretaries, the general secretary of the Central Committee referred to the basic importance of improving management qualifications for the full implementation of the 10th party congress resolutions. As directed by the fifth plenum, the Politburo has issued "measures for further perfecting management, planning and economic cost accounting."

This resolution now has drawn the conclusions resulting for management, planning and economic cost accounting from the penetrating changes in the GDR economy by way of our intensively expanded reproduction. Now the conditions have been set that enable planning and economic cost accounting together to make a still more effective contribution to carrying out our economic strategy.

What Is Expected of Every Manager Today

That resolution applies the insights of Marx, Engels and Lenin to our conditions in socialist construction.

It takes account of our own concrete experiences and aims at making still more effective the advantages that inhere in socialism. The resolution accepts as a given that management, planning and economic cost accounting always are parts of a whole. That is in line with our basic Marxist-Leninist conception of socialist planned economy and democratic centralism.

First in the resolution comes the task to provide combine management with more expertise on the basis of the principle of democratic centralism. That is the basic issue so that the combines, as resolved at the 10th party congress, can fully live up to their economic responsibility.

Equally clearly the resolution emphasizes that the general director of a combine bears a personal responsibility for the streamlined management of the entire reproduction process. The alpha and omega of the general directors' precise management activity is to control not just particular aspects and sectors but the entire reproduction process in all its internal interconnections from the standpoint of leading intensively expanded reproduction to top achievements.

The standpoint that solving economic tasks in the combine is political work was confirmed. The general director of a combine first and foremost is and remains a political functionary who has to organize the solution of fundamental economic tasks in his area of responsibility on behalf of strengthening the

GDR. The general director is the agent of the workers and farmers power. He can manage a socialist industrial combine successfully only if he maintains a firm relationship of trust with the working people and closely cooperates with the party organizations, the trade unions and the FDJ. That also means the general director has to concern himself constantly with the further improvement of the working and living conditions.

Performance Rating According to Mandatory Plan Figures

The resolution emphasizes that central state planning is the decisive basis for socialist economic management. The combines and enterprises are given mandatory official plan figures on the basis of which they organize their work. That includes parameters for the development of

- industrial commodity production and the production of the building trade and the construction industry,
- labor productivity,
- net production,
- profit, and
- the production of economically important products toward public supplies, the material-technical supplies for the economy, and for export.

These parameters are fundamental performance criteria for the dynamic growth and efficiency improvement of the economy at large. Their mandatory allocation down to the combines and enterprises is and remains an indispensable basic element of our socialist planned economy.

In his conference with the first kreis secretaries, Comrade Erich Honecker affirmed that further improving material and financial balancing stands in the forefront of planning. That way alone can the tasks for the ministries and combines always reliably be derived from the requirements for overall economic development.

All balancing decisions are primarily to be aimed at fundamentally improving the cost/benefit ratio.

The performance rating of the combines and enterprises and economic cost accounting takes place on the basis of the official mandatory parameters in their totality, the balance sheets and the norms and standards on which they are based. This way, official and economic requirements are to be more effectively combined with the economic situation and economic interests of the combines and enterprises and their collectives.

Efficiency Growth Is a Gain for Socialism

The new intensification measures are placed in the forefront in this. For that reason, as a contribution by the enterprises to the national income, the parameters of net production, profit, and products and performances for the population and for export are gaining a still higher place value in the performance rating.

The performance comparison is carried out with the aid of those parameters which jointly reflect one's own performance in production as well as one's own results in intensification, i.e., in the effort to reduce production consumption and prime costs, and high economic results in provisioning the population and in exports.

The same applies to profit, which we characterize as profit for socialism. It marks a compound expression for the efficiency of the whole reproduction process in a combine or enterprise. Thus economic cost accounting is, concretely, organized in such a way that combines and enterprises make more profit if they

- increase the output of high-grade products in accordance with economic demand,
- reduce costs, and
- reach a higher export efficiency.

The basic political goal of the measures decided on is to offer the general directors of the combines efficient tools for fulfilling their responsibility to the party in ensuring a high performance growth--and this exclusively by way of greatly improving the cost/benefit ratio.

Constantly Analyzing Costs and Benefits Everywhere

Sixth: Comrade Honecker's speech before the first kreis secretaries illuminated the great significance of the performance comparison for successfully implementing the 10th party congress resolutions. Performance comparison is a basic method for the political leadership in economic processes. It helps tap important intensification reserves.

So it is not by chance that with the same rigor in which the new all-inclusive intensification tasks were elaborated the performance comparison method has been applied.

The key issue in every performance comparison lies in the analysis of the cost by which any result was achieved. That is a cardinal question of political economy. By constantly checking costs and results and gaging them against best performances we reach higher efficiency, which is needed for success in the effort to reduce the expenditure of live and embodied labor.

Marx has made that crystal clear in his "Capital." As one knows, he determined the value of a good as the mean magnitude of expenditure of socially necessary labor. This says that there is an objective, social measure for the expenditure of labor that applies everywhere.

On behalf of our economic and social policy, we have the possibility and the obligation to manage and organize labor in such a way that ever reduced efforts produce ever better results. A deliberate performance comparison according to plan is a basic method for management activity and for conducting socialist competition in socialism.

It cannot be left to the whim of anyone in socialism whether or not he carries out a performance comparison. Instead, everyone should realize that the performance comparison is a component of socialist planned economy, one of the bases for constantly seeking higher efficiency. Thus we shall continue the performance comparison with the same determination with which we started it.

In economics we always deal with objective, irrefutable connections and laws. Thus we must organize our labor with a high sense of political responsibility. That holds true for management activity as much as for the party organizations' political-ideological work.

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GERMAN DEMOCRATIC REPUBLIC

DEVELOPMENT, PRODUCTION OF QUALITY CONSUMER GOODS URGED

Economist's Projection

East Berlin DER HANDEL in German Vol 33 No 1, Jan 83 (signed to press 22 Dec 82) pp 8-9

[Article by Prof Kurt Bernheier, economist, East Berlin: "More Consumer Goods of High Standards." A translation of the official text of the Tasking Workbook Decree (Pflichtenheft-Verordnung), cited in footnote 2, follows this article]

[Text] New consumer goods have a multiple effect upon the social production process and make it possible to achieve greater economic efficiency.

Consumer goods production is primarily mass production. For this reason, relatively small economies per unit produced in terms of energy, material, production time and unit consumption, regarded in the sum, can bring about substantial results. This has been demonstrated by new developments in television sets, forced-air hand driers and washing machines, among others. With the evolution of human needs as well as the level of productive forces, there is no such thing as standing still. The production in the future of a fully automated washing machine will make possible substantial economies in its manufacture and use.

Level of Innovation to be Systematically Raised

It is becoming clear that scientific-technical and economic advances of a high order can be achieved in the consumer goods sector if existing and newly created needs are met in a purposeful fashion by products characterized by their innovativeness, reliability and elegance and based upon new technical solutions. In this case, it is also a question of " . . . more commitment,¹ more ideas, more enthusiasm for good solutions and more concern for detail." This is also the way to increase the exports of consumer goods and in this way to fulfill our foreign trade obligations. More export-quality consumer goods also have a positive effect upon domestic offerings. Experience teaches us that more high-quality consumer goods and a rising level of innovation require both central consumer goods combines and enterprises to expand and to consolidate their pre-production knowledge of demand requirements and their future scientific-technical opportunities. This assumes a more exact knowledge of the international state of the art. Over the next 10 years, at least 75

percent of present consumer goods will be replaced by new products with greater efficiency and lesser consumption of material and energy. It will be possible on this basis to refine long-term planning efforts in the form of product development and research. What is at stake is not simply more ideas, but their higher standard, so as to achieve greater credibility for setting goals and the complex measures required to fulfill them. This is closely related to the use of the tasking workbooks, the decisive management and control instruments whose role in assuring high creative accomplishments in research and development has recently been further strengthened.² As seen from the experiences of the cooperation between the central commodities offices for both household goods and technology with the industrial combines, it is necessary to intensify the influence of the market in the phase of conceptual planning and upon the work with the tasking workbooks and to extend it to other product lines. Wholesale trade agencies must gear up for a greater influence role. This will demand carefully worked out studies and require development and greater knowledge of scientific-technical opportunities within existing production conditions. At that point, well-substantiated ideas for new products and for entire product systems, as well as their necessary assigned priorities, can be put forward.

More and more consumer goods for domestic needs and for export are being developed and produced. This will have to find clear expression in the tasking workbooks. Furthermore, it will be advisable if, in the future, both domestic and export trade agencies work more closely with each other in influencing new product development and refinement. This is also a question of efficient management and planning.

More high-quality consumer goods will also demand of the consumer goods combines that their product research and development efforts and their translation into production be intensified and accelerated. The goal must be to complete research and development within 2 years at most, to undertake production quickly and to allow no cancellations of any kind. High production output has to be achieved within shorter lead times. These measures will demand greater emphasis on the development of equipment for effecting greater efficiencies as well as the construction of machinery, tools and testing equipment.

Almost all consumer goods combines are faced with the important task of expanding their research and development potential in both qualitative and quantitative terms, of achieving better organization and of collaborating with partners outside the combine.

In order to demonstrate the production of consumer goods in specific terms of products, the government planning index "Production of New Consumer Goods by Quantity and Value" has been introduced. Planning ensues in terms of consumer goods which have been put into production during the planning year and whose introduction has taken place over a span of up to 3 years before production.³

Innovation and Refinement to be Coordinated

Today it can no longer be a question of spontaneously bringing out a new grill or toaster, a new radio set or another passenger car trailer. Duplicate developments can, at worst, squander limited personnel, material and financial resources. Development and production of new and improved consumer goods must be coordinated. There are at least two reasons for this. Scientific-technical progress both permits and demands the development and production of new high-quality consumer goods and, on this basis, the goal of coordinated product systems which offer manifold efficient possibilities for the customer's use in the household and in the garden, during leisure time and vacation, for self-improvement and other purposes. There already exist various indications and examples which should be more quickly generalized. We might call to mind in this connection the Safir watersports line developed by the Plastics and Elastics Combine or the multiple component system of Pneumant couplings for all types of garden hose connections with water taps.

A second reason is to be found in the fact that, at present, the most varied combines and enterprises are working on the improvement of consumer goods lines or are just beginning to put new consumer goods into production. This includes the central consumer goods combines whose innovator role is being intensified in the development of consumer goods, as well as the capital goods combines which are expected to pick up consumer goods as part of their production program and the regionally-controlled combines which will have to increase substantially their contribution to consumer goods production.

All of these activities will have to be efficiently coordinated and directed. This can only be achieved through the combines accountable for consumer goods. Specifically, the combines for household appliances, tools, radio and television, electrical appliances, Pentacon and others will be obliged to make full use of their management function.

Involvement of Capital Goods Combines

On the basis of existing experience, e.g. in the household appliance combine, schedules have been laid down so that the accountable combines will develop product group concepts with proposals for the involvement of capital goods combines by 1985. The cooperation of the accountable combines with the production goods combines has, in the meantime, been definitively regulated.

The household appliances combine has recently issued a product line catalog as well as a proposal for involving capital goods combines so as to free capacities in the appliance combine for its main production and to disseminate to the capital goods combines suggestions for the production and delivery of consumer goods and in this way more quickly achieve full coverage of demand.

The product catalog is to be updated twice a year and forms the basis for all negotiations. In recent months, initial production of finished and component items has been agreed upon by seven centrally controlled and three regionally

directed enterprises. On this basis the VEB Refrigeration Technology plant at Niedersachsenwerfen within the Ventilation and Refrigeration Combine put into production within only 10 months the household deep-freezer H 115 TK of the VEB DKK Scharfenstein of the Household Appliance Combine. Production capacities were expanded such that during 1985, 50,000 freezers can be produced. Agreements were concluded with the VEB KKK Scharfenstein to improve this freezer and at the same time to prepare plans for a newer and larger model which would complement the system. The Mansfeld Combine, to cite another example, prepared from plans drawn up by the VEB Electrical Tools Sebnitz corresponding to the development stage K 5, a program for the more efficient production of hand-held electrical drills with a 360 watt capacity, whose delivery has already begun. In this case, not only was final production undertaken, but 65 percent of the 277 component parts, including the motors, were also produced. Thus an attractive consumer product can be manufactured even outside the traditional production framework. This is an example of how major economic, scientific-technical and production capacities of a capital goods combine can be employed for the production of consumer goods. In both combines, which turn out primarily production equipment, the consumer goods program was incorporated into the existing product line program and helped to augment it. The share of consumer goods in total production at both these combines amounts to 6 percent. It is assumed in this case that consumer goods production will expand more quickly than will that of capital goods.

Greater Market Effectiveness

The development and production of new consumer goods demands that state trading organizations expand their active role. In a joint effort with industry, conditions will have to be created such that each new development will lead to important economic results and that planning mistakes can be avoided. Now as before, the decisions concerning the further refinement of cooperation between industry and trade will be extraordinarily critical. Further advances have already been set out as goals. Thus, joint product line strategies have been worked out between the household appliance and the radio/television combines. The next generation of color television sets, new stereo- and mono-super, miniature and portable radios as well as innovations in sound technology has been established in concrete product terms. In doing so, innovations have been developed in all three price categories; scientific-technical progress will have to manifest itself even in the lowest price category.

In the meantime, representatives of the wholesale trade have been participating more vigorously in important reviews with industry and making themselves heard early and at length in the development of new products, whereby costs and prices as well as appropriate packaging have to be given greater attention. Most importantly, greater emphasis is to be placed upon cooperation with the accountable combines. As remarked earlier, their innovator function is to be enhanced so as to bring about the production of high-quality consumer goods in an efficient fashion by greater economic impact of science and technology. An essential part of this is a greater mastery of the distribution and marketing process in the sense of a proper relationship of expenditure and result.

At the same time, the combines are obliged to intensify their cooperation with other industry combines for the increase of consumer goods production. Capital goods producers make inquiries to the wholesale trade as to which products within the framework of consumer goods production should be manufactured. In the end, constructive proposals can only be advanced in close collaboration with the accountable combines. It has been proposed that agreements on effective decision input and collaboration with the capital goods combines be included in the coordination agreements with the accountable combines.

It is also important, however, that the various branches of trade expand their exchange of experience gained from collaboration with the production sector. Interesting points of departure could be offered by the process involved in the development of the "delikat" lines. In this case the creation of specialist groups from industry, agriculture and commerce as well as the assignment of project leaders proved useful, as did the contractual involvement of research institutes, the allocation of incentives and agreements between the various ministries involved.

New products cannot be left to their own fates. Wholesale and retail trade agencies must make concerted efforts to assure that newly developed items are made available and marketed appropriate to their quality. Findings gathered from sales negotiations and customers' experiences will have to be systematically compiled and quickly passed on to the production enterprises. On the other hand, the producers will have to be more attentive to suggestions for improving product quality and the availability of customer service.

Notes:

1. Cf. the Report of the SED Central Committee to the 10th Party Congress of the SED, statement of Comrade Erich Honecker. Dietz Verlag, Berlin 1981 p58.
2. Cf. Tasking Workbook Decree, GESETZBLATT DER DDR, I, 1, 1982
3. Cf. Order Concerning the Augmentation of the Organization of National Economic Planning of the GDR, 1981 through 1985, GESETZBLATT DER DDR, I, 14 of 27 May 1981.
4. Cf. Order No 3 Concerning the Augmentation of the Organization of National Planning of the GDR, 1981 through 1985, GESETZBLATT DER DDR, I, 18 of 13 May 1982.

Text of Tasking Workbook Decree

East Berlin GESETZBLATT DER DEUTSCHEN DEMOKRATISCHEN REPUBLIK in German Part I No 1, 14 Jan 82 pp 1-5

[Official text of "Decree on the Tasking Workbook for REsearch and Development Tasks--Tasking Workbook Decree (Pflichtenheft Verordnung)--dated 17 December 1981," signed by W. Stoph, chairman, GDR Council of Ministers; and Dr Weiz,

minister for science and technology. A translation of the official text of the 15 October 1981 Deliveries Decree (LVO), cited in footnote 1, is published under the heading, "New Regulations on Defense Deliveries, Military Buyers Published," in JPRS 80076, 10 Feb 82, EAST EUROPE REPORT: POLITICAL, SOCIOLOGICAL AND MILITARY AFFAIRS No 1974, pp 13-49]

[Text] Article 1: Scope

(1) This decree shall apply to:

- state and economic administration authorities, combines and enterprises,
- scientific and polytechnical institutes and institutions equivalent to them,
- the Academy of Science of the GDR and other scientific academies, universities and post-secondary educational institutions.

(2) The provisions of this decree shall apply to research and development tasks involving products, processes or technologies.

(3) This decree shall also apply to scientific-technical tasks for the economic assurance of national defense, unless other special provisions are contained in the Deliveries Decree.

Article 2: Principle

So as to improve the level and the effectiveness of scientific-technical efforts, tasking workbooks are to be compiled for all research and development tasks leading to products, processes or technologies. The tasking workbook is a permanent component of planning for scientific-technical efforts. It is an important management document of the general director of the combine (hereinafter referred to as general director) for the assurance of high creative performance in research and development on the basis of the central national economic goals. The tasking workbook is a binding underlying instrument for the financing and stimulation of scientific-technical effort and for the performance evaluation of the research and development collective.

Article 3: Responsibility of the General Director

(1) The general directors are obligated

- to translate, by use of the tasking workbook, the economic goals derived from the requirements of the national economy into exacting product- resp. process-concrete objectives for research and development work and to assure that the centrally assigned economic objectives recorded in the tasking workbook are all of them achieved or surpassed.

- to assure that the objectives recorded in the tasking workbook take account of the results of advanced international standards at the time of their market impact and that first-quality products be developed which contribute to the technical-scientific level of comparable products on the world market.

- to collaborate closely, in compiling the objectives of the tasking workbook, with the principal future users, the Office for Industrial Design, the Office for Standardization, Measurement and Materials Testing--if there is a question

of products with a legal requirement for testing-- , other control authorities and the responsible agencies in the areas of foreign and domestic trade.

(2) The general directors must involve all responsible divisions of the combine--specifically those for research and development, marketing, material procurement, management and production--as well as the state director of the Technical Control Organization (TKO), the head of the section for prices and the chief accountant in the compilation of the tasking workbook.

(3) Together with the compilation and confirmation of the tasking workbook for products, processes and technologies, decisions for the establishment of the material-technical objectives, including investment costs, are to be prepared.

(4) The obligations of the general director, according to this decree, are under the supervision of the directors of the state and economic administrative authorities, as well as of the enterprises to which scientific and scientific-technical institutions and equivalent institutions are directly subordinated. In the case of district-managed combines and enterprises, the chairmen of the district economic councils, resp. the directors of the other responsible technical authorities shall supervise the duties of the general director. Within the realm of responsibility of the Minister for University and Higher Technical School Affairs and the president of the Academy of Science of the GDR, the minister, resp. the president, with the agreement of the Minister for Science and Technology, shall determine who is to supervise the duties of the general director.

Article 4: Content of the Tasking Workbook

(1) The tasking workbook must assure that a high degree of production efficiency is achieved through the research and development findings, that material consumption incident to production is diminished and that a high export growth rate is assured and that imports are substantially reduced. Binding objectives for the development of production, for cost and price levels as well as quality standard indices for the development must be included.

(2) In addition, the tasking workbook must indicate:

- the economic objective with the most important indices for the development of performance and effectiveness (including goals for license assignment), using as a basis time norms for assuring short operational deadlines,
- the assignment of scientific-technical tasks and the scientific-technical level to be achieved for the development of the product, the process or the technology,

- the conditions for their achievement (expenditure according to operational stages and target dates).

In the case of processes and technologies, the economic objectives are to be made relevant to their effects upon the production of the products in question.

(3) The assignment of goals and tasks is to be elaborated in the tasking workbook through calculations and specific indicators, Specifically, these include:

--International standards comparison, analyses of trends, patent rights and markets; patent concepts, and the assurance of project security.

--Scientific-technical parameters (including indices for functioning, reliability and use-life) as well as important testing conditions.

--Innovation, patent right and design goals as well as proof of the use of scientific-technical information and of completed patent searches.

--Proof of adherence to national economic norms.

The main scheduling plan, whereby as a rule a maximum of 2 years from the time of the confirmation of the tasking workbook until completion of operations is admissible.

--Computations demonstrating the ratio of expense and economic result, duration of backflow, production effectiveness, export effectiveness, economies in working time, material, energy and costs as well as other data required for reaching a decision.

(4) In order to present these statements in the tasking workbook in such a way that they can be surveyed and evaluated, a summary record of the objectives contained in the tasking workbook--hereinafter referred to as the tasking workbook summary--(appendix to this decree) is to be employed. The tasking workbook summary is an integral component of the tasking workbook.

(5) For tasks with an operational duration of up to 6 months, the responsible general director is authorized to decide whether the tasking workbook summary is to be regarded as the tasking workbook. Excluded for this are tasks related to the economic assurance of national defense.

Article 5: Endorsement of the Objectives of the Tasking Workbook

(1) For the compilation and assignment of objectives in the tasking workbooks, the most important users and suppliers as well as representatives of foreign and domestic trade are to state their economically justified requirements.

(2) The tasking workbook summary is to be delivered to the combines, enterprises, institutions and state authorities involved in the disclosure defense, as well as to the ministers, in accordance with Article 8, at least 4 weeks before the defense of the tasking workbook. Upon request, they are also to be supplied with the complete tasking workbook. In every instance the Office for Standardization, Measurements and Materials Testing--if the products in question legally require testing--is to be supplied with the complete tasking workbook.

(3) In the disclosure defense, the following parties, in accordance with the specifications of the task, are to assert their approval or rejection of the goals and tasks indicated in the tasking workbook summary:

--important users,

--main suppliers, resp. cooperation partners,

--the responsible foreign trade enterprise,

--the responsible domestic trade organizations as established by the Ministry for Trade and Supply,

--the Office for Standardization, Measurement and Materials Testing (in the case of products requiring testing), resp. other control authorities,
--the Ministry for Materials Management, the Office for Inventions and Patents and the Office for Industrial Design (if they participate in the disclosure defense in accordance with paragraph 6),
--the Office for Prices (regarding the upper limits set for costs and prices).
Any rejection must be justified.

(4) If, in an exceptional case, a statement in accordance with paragraph 3 has not been made, it is to be issued in written form within 2 weeks after the disclosure defense. Problems arising between the partners are to be resolved on their own responsibility. If agreement cannot be reached, the directors of the higher ranking authorities, in the case of combine enterprises the general directors of the combines, must reach a decision within 4 weeks. In the case of products required by law to be tested, the endorsement of the president of the Office for Standardization, Measurement and Materials Testing is to be sought for a decision.

(5) If the involvement of the main users, resp. other economically significant users is impossible or only possible at an unjustifiable expense because of the broad range of usage, the Office for Standardization, Measurement and Materials Testing can substitute if it is a question of a product required by law to be tested.

(6) The Minister for Materials Management, the president of the Office for Inventions and Patents and the director of the Office for Industrial Design shall determine which scientific-technical tasks of the tasking workbook require their endorsement. For tasks of the state science and technology plan, this determination shall ensue in consultation with the Minister for Science and Technology. These determinations are to be made annually together with the state planning instructions.

(7) For scientific-technical tasks for the economic assurance of national defense, the defense procurement authority is authorized to determine whose approval is to be sought before certification of the tasking workbook.

Article 6: Certification of the Tasking Workbook

(1) The certification of the tasking workbook must ensue as a result of the disclosure defense and is to be noted by the general director on the tasking workbook summary.

(2) For scientific-technical tasks for the assurance of national defense, the certification ensues additionally through the defense procurement authority.

(3) For the defense and confirmation of each tasking workbook, evidence of the utilization of the scientific-technical literature as well as of completed patent searching is an obligatory condition.

Article 7:

- (1) If scientific-technical tasks are carried out on the basis of economic contracts, the economic and scientific-technical objectives and task assignments are to be worked out jointly by the partners.
- (2) The confirmation of the tasking workbook must be forthcoming through the ordering agency and the contractor.

Article 8: Decisions of the Ministers for the Defense of the Tasking Workbook

- (1) For the implementation of important task-related economic goals for state planning tasks, the Minister of Science and Technology shall decide, using the tasking workbook summary, which tasking workbooks shall be used for the defense of the particular goal, which because of its special consequences for the development of production capacity, shall be under the direction of his deputy, resp. a vice president of the Office for Standardization, Measurement and Materials Testing. The competent minister shall be informed of these decisions.
- (2) In addition to this, the confirmed tasking workbooks for all other tasks of the state plan for science and technology are to be presented to the Minister for Science and Technology through the competent minister within 4 weeks after confirmation. The Minister for Science and Technology can request that work continue toward the refinement of the economic objectives if they do not correspond to national economic requirements.
- (3) With other tasks important to the national economy, the ministers can reserve to themselves the acceptance of the defense of the objectives of the tasking workbook. The provisions of paragraphs 1 and 2 are not hereby affected.

Article 9: Projection of the Objectives of the Tasking Workbook

- (1) The necessary refinement of the objectives of the tasking workbook during the implementation of the scientific-technical effort arising from the development of economic requirements and international standards is to be projected by the general director in the tasking workbook and to be taken into account in the formulation of the annual plans.
- (2) In the event of changes in the objectives of the tasking workbook, approvals in accordance with Article 5 are to be obtained once again. Those parties authorized to issue such approval as well as the competent ministers themselves can request the projection of the objectives of the tasking workbook from the general director.
- (3) Changes in the substance or the scheduling of objectives in the tasking workbooks can only be undertaken with the approval of the Minister for Science and Technology.
- (4) In the event of changes in the tasking workbooks for scientific-technical

tasks aimed at securing national defense, the approval of the procurement authority is required in advance of any decision.

Article 10: Verification, Fiscal Review and Signing of the Tasking Workbooks

(1) The evidence of compliance for the research and development undertaking "Confirmed Tasking Workbook" is effected when all necessary approvals and confirmations of the tasking workbook summary are recorded.

(2) The confirmed tasking workbook is a prerequisite for the continued financing of the particular scientific-technical task. The tasking workbook can be requested by the bank for this purpose.

(3) For evidence of compliance with the objectives in the tasking workbook as well as for evaluation of the results achieved, the progress of research and development activity is to be documented for scrutiny in accordance with the legal provisions in force.

(4) The tasking workbook becomes valid with the signing of the record of its final defense.

Article 11: Security of Classified Information

(1) Unless otherwise determined in accordance with legal provisions at an earlier date, the decision concerning the security of classified information in the accomplishment of research and development tasks is to be made by the competent director at the time of the development of the objectives, at the latest during the preparations for the disclosure defense. Staffing, organizational and material measures for normal security of scientific-technical findings are to be planned and implemented in a manner appropriate to the task. Such measures are to be taken under advisement and agreed upon with the partners in connection with the defense. They are to be confirmed, agreed upon and accounted for in accordance with the provisions of this decree.

(2) Security requirements, specifically the protection of secrets related to research and development tasks for the assurance of national defense, are to be stipulated by the procurement authority.

Article 12: Concluding Clause

Implementing regulations for this decree shall be published by the Minister for Science and Technology.

Article 13:

(1) This decree shall become effective on the date of its publication.

(2) No longer in effect as of the above date are:

--The Regulation of 27 April 1977 Regarding the Basic Tasking Workbook for the Development and Refinement of Products, Processes and Technologies--Tasking Workbook Regulation--(GESETZBLATT DER DDR I, No 14 p 145).

--Regulation No 2 of 18 May 1979 Regarding the Basic Tasking Workbook for the Development and Refinement of Products, Processes and Technologies--Tasking Workbook Regulation--(GESETZBLATT DER DDR I, No 15 p 119).

NOTES:

1. Currently in force is the Decree of 15 October 1981 Concerning Deliveries of Goods and Service to the Armed Forces--Deliveries Decree (LVO)--(GESETZBLATT DER DDR I No 31 p 357).

2. For the compilation of international standards comparisons, the "Guidelines for Evaluation and Comparison of Serviceability Properties of Industrial Products"--ASMW-VW 1393--published by the Office for Standardization, Measurement and Materials Testing.

3. The printed form, "Summary Record of the Tasking Workbook," can be obtained from the publishers, Vordruckverlag Spremberg, Order No PV 1420.

4. Currently in force is the Order of 20 June 1979 Concerning Dissemination of Information Regarding Scientific-Technical Research Findings (GESETZBLATT DER DDR I No 19 p 164).

5. Currently in force are:

--Order of 23 May 1973 Concerning the Implementation of Defenses of Scientific-Technical Tasks and Findings (GESETZBLATT DER DDR I No 29 p 289).

--Order of 28 May 1975 Concerning Nomenclature of Operational Stages and Results of Tasks Within the Science and Technology Plan (GESETZBLATT DER DDR I No 23 p 426).

--Order of 20 June 1979 Concerning the Dissemination of Information Regarding Scientific-Technical Research Findings (GESETZBLATT DER DDR I No 19 p 164).

-Appendix to Preceding Decree-

Ministry:	Security Classification:
	Date:

SUMMARY RECORD
OF THE TASKING WORKBOOK OBJECTIVES
-Tasking Workbook Record-
-Product/Process/Technology-

Designation of Task:	
Combine/Enterprise/Agency:	
Project Chief	
The Tasking Workbook was Defended on: Before the:	
Confirmation by the General Director:	
Endorsement by:	Combine/ Enterprise/ Agency: Signature: Capacity:
Main User:	
Main Cooperating Partner or Supplier:	
Office for Standardization, Measurement and Materials Testing:	
Office for Inventions and Patents:	
Office for Industrial Design:	
Foreign Trade:	
Domestic Trade:	
Office for Prices:	

ECONOMIC OBJECTIVE

Quality Designation Sought:		Target Date:				
No.		Quantity Unit	Introduced 19__	1st Follow-up Year	2nd Follow-up Year	3rd Follow-up Year
1	Targeted Annual Production					
2	Demand					
3	Socialist Currency Countries					
	Non-Socialist Currencies					
		Quantity Unit	New Product (Process)	International Optimal Value	Replaces Product (Process)	
Material Requirements, Most Important Types						
Energy Requirements (kI, kwh)						
Price Maximum (Indust'l Sales Price (M)						
Production Cost Maximum (M)						
Replacement of Non-Socialist Currency Imports (VM)						
Foreign Exchange (Socialist Currencies)						
Margin* (Non-Socialist Currencies)						

* Currency Margin (Valuta Marks): Works Price (Marks) resp. Currency Margin (Valuta Marks): Total Production Costs.

SCIENTIFIC-TECHNICAL OBJECTIVE

Overall Goal to be Achieved as a Result of Scientific-Technical Effort:

Principal Technical Performance Data:				
	Volume/ Quantity Unit	New Product (Process)	International Optimal Value	Replaces Product (Process)
Specific Performance Parameters:				
-Mass/Performance Ratio:				
-Microelectronics Employed:				
-Reliability. Service Life:				

Additional Objectives:	
(e.g. -Design Goals -Innovation Goals -Patent Allocation or Acceptance)	

CONDITIONS FOR TASK ACCOMPLISHMENT
-Expenditures and Time Limits-

Total Expenditure of R&D Funds	
Including:	
Up to Testing of Pilot Model or Microtechnical Experiment (1000 M):	
Target Date:	
Up to Testing of Production Model or Macrotechnical Experiment (1000 M):	
Target Date:	
Up to Test Production Run (1000 M):	
Target Date:	
For Material-Technical Testing (1000 M): (e.g. Model Construction, Project-Related Equipment, Testing Facilities)	
Number of Senior Professional and Technical Staff to be Utilized (Full-Time Equivalents):	
Expenditures for Production-Related Investments (1000 M)	
Onset and Conclusion of Research and Development:	
Target Date for Production Start-Up:	

NIECKARZ VIEWS DILEMMA OF BALANCED BUDGET VERSUS SOCIAL SPENDING NEEDS

Warsaw RZECZPOSPOLITA in Polish 5 Apr 83 p 2

[Interview with Stanislaw Nieckarz, Finance Minister, by Janusz Kotarski:
"The Cost of the Crisis Must Be Distributed Justly"]

[Text] [Question] The deficit budget is one of the causes of inflation. The 1983-1985 plan contains a considerable scale of budgetary expenditures, broadly understood as designated for state protective functions. What are the chances that these expenditures will not become an obstacle in the fulfillment of our anti-inflation program? This question was directed to the Finance Minister, Stanislaw Nieckarz by a PAP journalist.

[Answer] We are a socialist country whose system principles dictate the range of the state's protective responsibilities. For 1985 we are anticipating the costs of maintaining social services (such as health care, culture and education) to reach a level of 680 billion zlotys. Therefore, they will exceed the last year's costs by 235 billion zlotys. This is a significant increase. However, it will not satisfy all the needs. It will only cover the operational cost of the newly-established objects, such as: hospitals, sanatoria, educational and cultural centers, etc. We are not anticipating in this sum, for instance, an increase in the pay fund, due to a different problem than the one I have mentioned. The individual remuneration in the entire budget will, therefore, increase by as much as will be allowed for that purpose from the funds available from a decrease in employment expenditures. I must add that the largest reserves of money still exist in the administration area.

The price subsidies of certain articles, especially of food products, and also of agricultural production means represent a real burden on this budget as well. The 1985 budgetary expenditures for those subsidies will reach about 660 billion zlotys. They will also be higher by about 100 billion zlotys. I am mentioning only some of the largest budgetary debits that will be due to the state protective function. Since we want to maintain that on, at least, the present level. These will, however, depend on the budgetary income, most of all, on the income derived from socialized units which supply about 95 percent of the total budgetary income.

The financial situation of the enterprises became stronger during the last year. However, the means by which that was achieved are unsatisfactory.

Because, to a large extent, the enterprise profitability resulted from price increases. We are fully aware of the fact that any immediate introduction of a very marked drain of the enterprise income would weaken the role of profit as an incentive and would make self-financing of the enterprises difficult. We want to position the instruments of finances in such a way that they might be favorable to the balancing of the entire economy and that they might strengthen the interdependence between production size and effectiveness and enterprise and employee income.

In 1985 the budget will share about 65 percent of the enterprise profits, and that will be slightly higher than at present (which is about 62 percent). That does not mean, however, that the enterprises will be poorer. Our estimates have shown that the enterprises will have the means at their disposal which will increase from 650 billion zlotys in 1982 to 860 billion zlotys in 1985. The instruments of financing must function in such a way that this income increase would follow an economically justifiable path and would result from higher production, from lower costs and from a better quality [of products]. All this necessitates the introduction of a certain type of "ticketing" both in modified principles in the economic reform and in the finance system itself. These "tickets" will be charged for an unjustified price increase, for raw goods and materials waste, for uneconomic management practices, etc. I want to stress it explicitly, however, that the budget does not hope to gain great income from these "tickets" and that they have a clearly preventive character.

It will not be possible to get rid of the total budget deficit at this level of social expenditures and with the so defined financing principles. In 1983 the deficit will still reach about 115 billion zlotys, while in 1984 it will be 90 billion zlotys. We are anticipating to balance the state budget in 1985. We realize that the budget deficit is due to nothing else but inflation. However, the budget is not the main source of inflation. The inflation comes, above all, from the enterprises, especially from those enterprises which increase employee pay without a decrease in their own production costs.

Viewing the economy as a whole, the proportion between capital accumulation and consumption must be maintained. The enterprises ought to realize as well that by earmarking a larger portion of their profits for a pay hike, they are also blocking their own development possibilities. Unfortunately, frequently their short-sightedness lingers on. They are convinced that, sooner or later, they will receive development funds from the budget or from their establishing agency, and they consider it a most pressing current matter to appoint their profits to the employee fund.

Many enterprises also hope for an increase in the amortization of their fixed assets after they reevaluate their fixed wealth. Thus, they hope to create some additional development financing possibilities.

I want to state that amortization from fixed wealth will be gradually debited to costs during the next 4 years. If we debited it all at once, the

total economy costs would increase by about 600 billion zlotys. That would cause a price increase raising our inflation ceiling.

The budget is slated to assume also a considerable portion of this amortization. This is the only way of bringing some essential changes into the structure of our economy. We shall achieve them by distributing so released means to the sectors and branches [of the economy] the speedy development of which is of a particular importance to us. The preferred areas in this respect have been defined by our 3 year plan. If we failed to do so, in a few years we would experience a repeat of the same economic structure. In view of those financing principles the enterprises must divide their profits more proportionately than they did thus far in order to simply keep themselves alive.

[Question] Our anti-inflation program also promises to increase population taxes and taxes for the nonsocialized sectors of the economy, including farming. To what extent will the budget be strengthened by income coming from these sources?

[Answer] The new systems of equalizing taxation from farmers and from non-socialized economic sectors will not have a decisive impact on the balancing of our budget.

These taxes constitute only 1.7 percent of its income, so, even if they doubled, they would not surpass 3 percent. I would like to emphasize the fact that proposals contained in our anti-inflation program are designed only to spread the costs of the crisis justly among the various groups of the population. They are also a means of exerting more of an influence on balancing the current streams of income with the supplies of goods.

The work on the detail tasks of the new taxing policy is still in progress. Thus, it is hard to talk about particulars at this moment. I think, already at the end of April I will be able to present some specific projections.

9934

CSO: 2600/765

FINDINGS OF GOVERNMENT POLL ON ENTERPRISE REACTIONS TO REFORM PUBLISHED

Warsaw RZECZPOSPOLITA in Polish 24 Mar 83 supplement pp 2, 4

[Article by Wieslaw Kalinowski, Pawel Karpinski: "Economic Reform and Its Results Evaluated by Consultant Enterprises (Poll Findings)"]

[Text] In an attempt to obtain needed data on the course of implementation and results of economic reform in enterprises, the government's plenipotentiary for economic reform addressed consultant enterprises last January with a request to fill out a poll developed specifically for that purpose.

The poll contained 4 sets of questions covering:

1. Characterization of economic results achieved by consultant enterprises in 1982.
2. Assessment of the functioning of systems-type solutions and economic mechanisms in 1982.
3. Assessment of systems-type modifications for 1983.
4. Predictions of economic results in 1983.

The following are findings analyzed from poll responses returned by the 83 consultation enterprises.

Part I

Question I

Were your enterprise's 1982 production and export results higher or lower than those achieved in 1981 and those planned for 1982? What is the growth rate of production of principal items manufactured by your enterprise.

Results above those obtained in 1981 were achieved by 59 percent of the enterprises, lower, by 39 percent of the enterprises, and unchanged results were posted by the remaining ones.

There is substantial concurrence in the growth rate of sales and the growth rate of production of principal items in individual enterprises.

In more than 56 percent of product groups listed by enterprises, output growth was registered.

In 76.3 percent of enterprises, production plans were either fulfilled or exceeded, while 14 percent of enterprises did not complete their plan tasks.

Among the 66 polled enterprises, 66 are exporters. They posted the following export results:

--export growth occurred in 47 enterprises,

--export decreased in 19, and

--assumed export tasks were exceeded in 28 enterprises and were not fulfilled in 17 enterprises.

Question 2

Were your production and export results in the second semester higher than those obtained in the first semester? If yes (no), which factors were of primary importance?

It follows from the answers that the second semester of 1982 brought about a significant improvement in production and exports: nearly 70 percent of enterprises posted production growth, and 66 percent, increases in exports.

Among the factors which had influenced improvement in production and export results, the enterprises (nearly 40 percent) ranked improved supply as first. Also listed were factors connected with production schedules, better discipline and increased work time.

Production decreased in nearly 30 percent of enterprises in the second semester, and export reduction was noted in 32 percent of enterprises. Among the factors which enterprises ranked as influencing production and export drop were: shortened work time, reduction of employment, decreased demand from foreign customers, repairs, and the worsening of supply.

Question 3

What was the status of supply in your enterprise as compared with previous years? Were any measures taken to allow for changes in the supply situation and, if so, what were they?

Answers conveyed by the enterprises indicate continued deterioration in the supply of raw and intermediate materials in 1982. Only 30 percent of enterprises found the supply situation to have been better or unchanged in comparison with the past years.

At the same time, the enterprises indicated improvement in supply, noted in the second semester of 1982.

It should be emphasized that there was no convergence between the production growth rate achieved in 1982 and evaluation of the supply situation. Among the enterprises which rated the supply situation as worse, 55 percent posted a drop, and 45 percent an increase in production.

Most frequently listed among measures taken by the enterprises in order to overcome supply difficulties, the following were listed most frequently:

- utilization of raw and intermediate materials domestic instead of the previously purchased imported ones,
- changes in product mix,
- recycling,
- emergency purchases of imported goods.

Also mentioned were interventions with the ministries, in turnover centers and directly with suppliers.

Part II

Question 1

How does your enterprise assess actual implementation of the principle of autonomy in planning, employment, price setting, foreign trade, and in its pattern of relations with its instituting body?

The evaluations of implementation of the autonomy principle under the reform vary depending on the sphere of activity, but most enterprises are of the opinion that the principle was actually implemented and made effective. Broken down by sphere of activity, these evaluations are:

- planning, 76 percent of positive marks,
- employment and wages, 94 percent of positive marks,
- price setting, 61 percent of positive marks,
- foreign trade, 62 percent of positive marks,
- relations with instituting bodies, 88 percent of positive marks.

The principal cause of negative assessments of the scope of autonomy was seen in planning, as reported by 13 enterprises.

Negative marks on autonomy in the sphere of price setting refer to are related with cases in which enterprise products were assigned official prices (21 cases) and regulated prices (3 cases).

There are varied assessments of autonomy in the sphere of foreign trade. Relatively numerous enterprises (15) evaluate it negatively. This is only partially related with distribution of products (4 cases).

Here is a sampling of opinions:

- Exports are still dominated by a monopoly of central foreign trade boards.
- Enterprises have no autonomy in this sphere, attempts are made to take over the functions of PHZ's [foreign trade enterprises].
- Concern with export volume and concentration of exports predominantly to the first payments area [capitalist countries] dictate the need to use intermediaries in the form of a PHZ partnership. Moreover, product groups included in contract agreements are dependent on purchases of imported cotton, which restricts price negotiations.
- It is difficult to refer to complete autonomy in the sphere of foreign trade considering what export activities during 1982 were regulated by a governmental operational program. Furthermore, regardless of existing regulations on the enterprises' freedom to choose a PHZ partner, such freedom is virtually nonexistent. There are also informal arrangements among PHZs on not taking branches away from one another. This is facilitated by branch-related distributions of PHZs.
- The trends in PHZ's and exporting enterprises are such as to reduce our influence on the manner in which export activities are conducted. Any enterprise contracting for export-related services and desiring to have its own say is brutally eliminated from or severely limited within the group of exporters, while those humbly accepting the conditions imposed on them can count on the good will of institutions possessing export licenses.

Assessments of relationships with instituting bodies for the most part refer to frequency of contact. The relationships are described by most enterprises as "sporadic," "loose," and "limited."

The following are several examples of negative evaluations:

- The ministry has not developed any principles to regulate its relationships with its subordinate enterprises.
- As far as our cooperation with the instituting body is concerned, we are enjoying partial independence and are otherwise restricted, e.g., in the determination of salary terms for directors, by outside interference in the volume and composition of production, and in the allocation of authority to distribute materials to plenipotentiaries and associations.

Our relations with the instituting body are shaped unilaterally by that body attempting to retain the old forms of impacting on enterprises, that is, by issuing instructions or demanding that superfluous data be provided or programs be developed, which add nothing to our output.

Question 2

Is your enterprise a member of a [new-style] association? If so, please describe how your enterprise joined the association and on whose initiative the association was formed?

How does your enterprise rate its association's results to date and its rendering of services to your enterprise?

Among the polled enterprises, 73 were association members, including 31 members of compulsory associations and 42 members of voluntary associations, while 10 enterprises were outside association structures.

Among the voluntary association members, 4 enterprises credited the former associations exclusively with the founding initiative, 3 enterprises were of the opinion that the initiative was shared, and in all the other cases the enterprises' own initiative had led to the formation of associations.

Owing to the brief period in which the associations have been in operation, most enterprises gave no ratings of their performance.

Here are some notable ratings of the compulsory associations:

--Judging by its present operation, the association is properly executing its statutory functions in coordinating the activities of its members.

--The association tends to carry out the functions of former associations, as attested by the following facts:

-continued expansion of the scope of authority and mandate of the association's management office.

-continued expansion of the scope of reports and information, including all financial results and costs (enterprises mail more reports to the association than to GUS [Main Statistical Office])

-a tendency to equalize profitability indexes of all of the association members,

-dictating volumes of tasks to enterprises and arbitrary determination of shipping distances for processed articles.

-There is no assistance whatsoever on the part of the association. Our enterprise senses no need for its existence.

The following ratings refer to voluntary associations:

--When forming the association, the enterprises assumed it was better to found a voluntary association rather than to end up in a compulsory one. The association tends to function as an intermediary between the instituting body and member enterprises, which is in line with the drift of the instituting body.

--Since its establishment, the association council held 5 meetings, debating the following problems, among others:

-foreign - exchange retention quotas on exports,

-control over deliveries to the domestic market.

A negative rating should be given to the results of the association's operation to date.

--The effects of joint operation are considerable, but still incomplete. Improvement is needed in the service operations of the association's joint desk and in the activities of association members.

--Up to now, our association has provided no services, except for its delayed reduplication of the regulations and mediation between the minister and the enterprises.

--There is a rebirth of the structures and conduct typical of the former association, which is reinforced by the functioning of operational programs, a system for materials distribution and by state control of footwear.

Question 3

Were self-government activities resumed in your enterprise? If so, please report the problems on which they are focused.

According to the data for early January, 1983, self-government bodies were in operation in 29 enterprises. Self-government activities were not resumed in the 54 remaining enterprises (6 enterprises had filed for reactivation of their self-government bodies).

According to the responses received, the reactivated self-government bodies focused on three groups of problems:

1. organizational, e.g.;

--bringing their bylaws into conformity with the law (5 responses),

--elections (4 responses),

--training (1 response).

2. wages and benefits, e.g.;

--wage problems (5)

--division of enterprise funds (4)

--workforce welfare problems (3)

3. economic, e.g.;

--assessment of enterprise economic status (1),

--assumptions of the 1983 plan and the 1983-85 plan (8),

--performance of the association,

--entering a foreign trade partnership (1).

Question 4

How does your enterprise rate its relationships with the bank and the functioning of the credit system?

Only 2 out of the 81 enterprises using bank credits gave a negative rating to the functioning of the credit system and to their relations with banks. The negative ratings refer to the financing of inventories.

While the overall rating was positive, the following comments were offered:

--The bank sets the terms for granting credit. From the enterprise's point of view, the bank is too strong a partner.

--Currently, amounts and deadlines for credits to be granted are determined by the bank, rather than by the enterprise itself, which limits the latter's financial independence.

--The enterprise is in good shape financially. Despite this, the bank is "dragging its feet" in providing full coverage for reported credits needs.

Question 5

How does your enterprise rate the functioning of the supply system in 1982? Approximately, what was the ratio of supply provided via the distribution and compulsory mediation system to supply provided under freely contracted agreements?

The responses are varied, with most of the polled enterprises taking no stand on the functioning of the supply system but focusing on characterizations of their supply situation. Only 37 enterprises offered clearcut ratings of the 1982 operation of the supply system, of which 20 were positive and 17 were negative.

Some typical comments follow:

--The system, based on voluntary agreements, functioned without disruptions or complaints. It is the only system that should be retained in the future. Information flow is rapid and reliable. The system based on distribution and compulsory mediation lacks these advantages. We believe it should be eliminated as soon and as completely as possible. It failed to assure full

coverage for allocations (ranging at 50 percent to 70 percent of our needs), regardless of the fact that the manufacture of our products in 1982 was placed under the state operational programs.

Most materials received by the enterprise in 1982 came through the distribution and compulsory mediation system. Additionally, compulsory mediation was expanded to include a number of mandatory go-betweens, which significantly raised the purchasing cost. Middlemen's agreements in the turnover of materials are dictated by the retention of earlier organizational structures in that turnover. Suppliers are unwilling to enter in voluntary agreements with enterprises.

--Allocations of materials to be delivered under the distribution and compulsory mediation arrangements essentially met the needs of our enterprise except that the distributors complied lagged behind the deadlines in completing the allocations.

Responses to the second part of the question, concerning the share of supplies acquired under freely concluded purchase-and-sale agreements within the total supply of materials, were provided by 57 enterprises. That share fluctuates, but in most enterprises it does not exceed 40 percent. A breakdown of enterprises by share of supplies freely contracted for is shown in Table 1.

Table 1

Share of supplies freely contracted for	Enterprise breakdown in percentages
a. up to 20 percent of total supplies	36
b. from 20 to 40 percent	37
c. from 40 to 60 percent	18
d. more than 60 percent	15

Question 6

How does your enterprise rate the functioning of the new solutions in the area of foreign trade?

Among the 83 polled enterprises, 66, or 79.5 percent, participate in exports. Among the exporters, 41 percent believe that the new systems-type solutions in foreign trade should be rated positively, 9 percent rate them negatively and 50 percent did not provide unequivocal answers.

The positive ratings especially emphasize the importance of foreign-exchange allowances (14 cases) and export discounts. In individual cases, participation in an FTO's trade policy and possibilities of acquiring export licenses were listed.

The following were noteworthy among the responses:

- Our enterprise engages in the import and export of goods primarily via an FTO. A 1982 agreement with the FTO regulates the principles of cooperation in this area. Our enterprise has some influence over selection of foreign customers, determination of delivery terms, and level of contract prices to be agreed. Enterprises of our branch entered in 1982 into an agreement with the FTO to set up a joint foreign-currency account from which our imports from the second payments area are financed.
- We give a positive rating to the functioning of the new solutions for foreign trade. Our representative's participation in determinations of export directions and levels of profitability enables us to expand our range of offers. Foreign exchange allowances assure our purchases of imported replacement parts.

Several enterprises pointed out what they see as negative components of the adopted solutions:

- the rate of foreign exchange is too low and does not assure profitability of exports,
- products covered by the central balance sheet are excluded from the system of tax discounts on exports (this was emphasized by enterprises directly involved with these products).

Question 7

Has your enterprise developed and implemented an internal system for emoluments? If so, please describe its principal features.

Has there been a change in the ratio of emoluments received by direct production employees versus other employees, resulting from the implementation of the provisions of Council of Ministers resolution 135?

The responses indicate that nearly all enterprises have modified their internal incentive systems, primarily by restructuring their wage schedules and instituting new regulations on bonuses.

Selected examples follow:

- An internal emoluments plan was developed in the enterprise in accordance with the Council of Ministers resolution 135 and implemented as of 1 August 1982. Its principal features include:
 - the introduction of 3-level classification tables for employees for paid by the hours worked,
 - the introduction of 2-level classification schedules for employees paid on the monthly basis,

- preparation of standards and principles for placement of personnel on specific classifications levels,
- review of principles for bonus-granting and increases in the share of basic bonuses in total emoluments,
- provisions for possible increases in wages, combined with reduction of employment in each organizational unit,
- linking the introduction of the modified emoluments plan with a reappraisal of personnel.

Implementation of the modified emoluments plan has decidedly increased interest in direct production jobs. The system is conducive to steady increases in the share of manual workers in the total employment.

--Internal systems for emoluments and bonuses were developed and instituted in our enterprise. They function under these basic principles:

1. base and preferential wage schedules for outstanding employees were introduced,
2. bonus granting systems were modified so that they are now dependent on:
 - profitability levels achieved by the enterprise,
 - increments or decreases in output or labor productivity,
 - levels of completion of the enterprise's own tasks.

A merit system to give credit for individual achievement has also been instituted. The principal novelty introduced in the enterprise lies in the establishment of opportunities for growth in return for improved results. Due to the provisions of Council of Ministers resolution 195, there was a slight change in the ratio of emoluments in favor of employees directly engaged in production.

--On the basis of the Council of Ministers resolution 135, our enterprise developed and implemented a new emoluments system, essentially based on:

- introduction of new wage schedules,
- modifications of the bonuses system (reducing the rates of statutory bonuses and increasing the flexible bonus fund), discretionarily awarded by master foremen and managers,
- instituting a permanent bonus for those working a full number of work days per month.

Employment composition has not improved on account of this system, however, in our estimation, the system markedly improved utilization of work time on the job and prevented significantly greater deterioration in employment.

--A new emoluments system was introduced in our enterprise already in June 1982 in a single department, and was extended to cover the entire plant in August. Its basic principles are:

1. identification of priority jobs and establishment of appropriate levels of earnings in these jobs,
2. ranking all other jobs in relation to priority jobs,
3. a new bonus sytem.

In the second semester of 1982, the system was revised and improved through minor adjustments. Employment composition has not improved noticeably up until now, but labor productivity significantly improved since the introduction of the new system. With regard to the emoluments ratio of direct production versus other employees, we report that under the new system 3 job types classified as priority jobs are all directly in production. Following the above-mentioned principles to set earnings on top levels resulted in a shift in wage ratios to favor our priority job types.

Responses to the question about shifts in wage ratio to favor direct production personnel were provided by 58 enterprises, out of which 43 posted such shifts. Employment composition occurred in a relatively low number of enterprises (12). Only 6 out of the 43 enterprises in which wages of direct-production workers increased the most reported concurrent improvement in employment composition.

Question 8

How does your enterprise rate the solutions introduced on the strength of Council of Ministers resolutions 182 and 186? Did these solutions contribute to improvement in your production and exports results?

Enterprise comments on resolution 182 are for the most part positive or refer to an enterprise's lack of opportunities to take advantage of export incentives instituted by the resolution.

The very few negative ratings (5) question the rationale of excluding centrally balanced items from the range of export incentives, along with putting a preference on poorer results in the first semester.

In one case it was asserted that the regulations of the resolutions put a sole preference on manufacturers of finished products.

Assessments of the Council of Ministers resolution 186 are more varied, dominated by positive ratings (43) expressed primarily by those enterprises which, thanks to the resolution, were able to disburse considerable amounts in emoluments for the last quarter of 1982. Decidedly negative ratings on the machinery of the resolution were offered by 20 enterprises.

Here are some of the comments:

--The resolution 186;

- created preferences for enterprises posting low production results in the first semester,

- has no "reciprocal action," e.g., causing automatic decreases in average wage if production drops.

--In our opinion, the resolution has failed to produce its intended results because:

- it was based on a gross production index, an ineffective measure, as it contains value components generated outside of an enterprise,

- its comparisons were based on the results of the first versus the second semester of 1982, which could, in cases of long production cycles, result in virtually astounding indicators of growth, totally unrelated to management efficiency,

- it was announced during the reporting period with the result that random effects, not only those produced by the applied measures, were included.

--The solutions introduced under Council of Ministers resolutions 182 and 186 permitted activation of resources to reinvigorate production in the second semester thanks to concurrent improvement in the supply of materials, technology and export deliveries.

The resolutions would have been of no help if there was no improvement in supplies and imports.

The system of discounts on income tax and the establishment of workforce funds unencumbered by contributions to the PFAZ [State Vocational Activation Fund], following the issuance of resolution 182, resulted in powerful incentives for export increases, in our case, exports to the Soviet Union. Our very favorable export results during the second semester are due to the preferences established by resolutions 182 and 186.

Resolution 186 undoubtedly contributed to promoting enterprise interest in production growth, which should be credited to it.

The fault of resolution 186 is, that the systems-type solutions adopted in it were erroneous, leading to growth trends in labor productivity and average wage. These disproportions would not have resulted if wage preferences ensuing from resolution 186 had been made contingent on growth rates in sales for the entire 1982 and up to 1981.

Question 9

What is the pattern of distribution of profit achieved in your enterprise in 1982?

The polled enterprises earmarked on the average 35 percent of their distributable profits for "consumption" (workforce fund and FAZ [Vocational Activization Fund] combined) purposes, of which approximately 15 percent went to FAZ and nearly 20 percent to the workforce funds.

Table 2 shows enterprise breakdown by their share of FAZ contributions in their distributable profits.

Table 2

Share of FAZ contributions in distributable profits (in percentages)	enterprises (in percentages)
a. 0	14
b. up to 10	35
c. from 10 to 20	7
d. from 20 to 30	19
e. from 30 to 40	2
f. from 40 to 50	5
g. more than 50	9

Table 2 indicates that most enterprises followed a policy of minimizing their contributions to FAZ. On the other hand, a relatively small group of enterprises opted for "consuming" their profits in order to raise their current levels of emolument. In an extreme case, an enterprise allocated more than 72 percent of its distributable profits to FAZ.

As far as the shares of workforce funds in distributable profits are concerned, there is a clear tendency for enterprises to oscillate around a "median" of approximately 20 percent, in contradistinction to the shares of FAZ contributions (Table 3).

Table 3

Share of workforce fund in distributable profits (in percentages)	enterprise breakdown (in percentages)
a. up to 5	5
b. from 5 to 10	10
c. from 10 to 20	34
d. from 20 to 30	36
e. from 30 to 40	22
f. from 40 to 50	2
g. more than 50	1

The above data indicate that a significant majority of enterprise maintained their consumption spending at levels allowing for their development needs. However, there exists a group of enterprises which had allocated more than half of their distributable profits for consumption purposes neglecting in extreme cases almost totally, their developmental needs.

Part III

Question 1

Are the implemented modifications in line with your expectations? In your opinion, will they contribute to improvement in 1983 economic results?

More than 90 percent of the polled enterprises declared that the modifications applicable to 1983 were in line with the expectations and nearly 80 percent claimed that they should contribute to improved economic results.

Typical assessments follow:

--The instituted modifications meet our expectations on these particular points:

- taxation of increments in the volume of emoluments to benefit FAZ stimulates enterprises to improve employment composition (primarily by increasing direct production personnel) and to increase labor productivity, thus improving their economic results,

- the introduction of net sold production as the measure of volume of sold production, as this measure permits identification of actual volume of production of an enterprise.

--They are more to the point than the modifications of a year before, especially wage setting (relating sales with the wage fund, rather than creating the economically illogical relation of employment and sales with average wage). However, the introduction of net production index can result in manipulations of the base, i.e., there may be a return to the deviations of the WOG [Large Economic Organization] or the small-scale reform systems.

All of the systems-type modifications have their applications in enterprises. They will force reductions in material costs, labor productivity improvement and production increases.

--No. The tax system disallows palpable improvement and establishment of development opportunities for enterprises (cost reduction is not profitable because of tax progression). We also believe it is unfair to include expenditures to support compulsory associations as part of justified costs over which enterprises have no control).

- apparently, the implemented modifications should be signaled to enterprises beforehand, so that they can prepare in advance for new systems-type solutions,

- the system of FAZ contributions and the mode of calculating the fund result in excessive blockages of emoluments because they make it impossible to maintain the already attained levels wage fund and application of incentive systems tested during the second semester of 1982. Due to this

fact, coupled with increasingly forceful pressures from the workforce to raise wage levels, the 1983 principles for FAZ contributions may cause deterioration in economic results.

--Most systems-type modifications were consistent with the expectations. In the area of materials supply, the instituting of so-called protected sectors with guaranteed supplies should promote discipline in materials-coproduction supplies for priority production plants. This is likely to be helped by the reduction of operational programs (from 14 in 1982 to 6 in 1983) and by the introduction of governmental orders.

--A vital modification concerns the principles for calculating FAZ contributions. Relating their levels with increments in the volume of emoluments rather than, as was the case in 1982, to increments in average wages, will promote higher labor productivity. We are also favorably disposed toward partial alleviation of progression and discounts in income tax assessments.

Likewise, we affirmatively evaluate possibilities for purchasing foreign exchange via efficiency bidding. These system modifications should promote improvement in our economic results.

Question 2

Does your enterprise intend to take actions entitling it to benefit from income tax concessions?

Nearly 90 percent of enterprises intend to take such actions. Most frequently listed entitlements to income tax concessions were: exports (21 enterprises), natural environment protection (15 enterprises), running a factory school (14 enterprises), occupational safety and health (13 enterprises), and improvements in quality (6 enterprises).

Question 3

What measure of production will be used in your enterprise in 1983? The responses indicate that the net production measure will predominate in the enterprises.

The breakdown of applied measures is as follows:

--net production, 59 percent of enterprises

--gross production, 32 percent of enterprises, and

--production in natural units, 9 percent of enterprises.

Part IV

Question 1

Has your enterprise developed a plan for 1983? If so, what kinds and sources of information were used in preparing the plan?

In principle, all of the enterprises either have developed or were developing plans for 1983. The most frequently listed data bases for the plans were:

- assessments of supply (contracts with suppliers, delivery schedules, appraisals of export possibilities), 38 responses
- assessment of demand (customer requirements, contracts, information from FTO's, international agreements), 48 responses,
- systems-type regulations, 35 responses,
- production capacities, 22 responses
- assessments of employment potential, 15 responses,
- assumptions of the 1983-85 national socioeconomic plan, 14 responses,
- anticipated plan performance in 1982, 8 responses,
- guidelines from instituting bodies and distribution lists, 9 responses.

This listing indicates that of decisive importance for enterprises preparing their 1983 plans were data on inputs of capital goods and sales potential (especially with regard to export production).

Question 2

What production growth was assumed for 1983 (in the event of a decrease, report its chief causes)?

A decisive majority of the polled enterprises (88 percent) assume growth in production in relation to 1982; decreases are anticipated by 8 enterprises. The causes for decrease are listed as:

- supply difficulties, especially in the food and farm sector,
- planned repairs or renovation,
- changes in the structure of production.

Three-fourths of the enterprises plan to obtain production results surpassing the rate of growth assumed in the central annual plan for 1983.

Table 4 presents a breakdown of the enterprises by production growth rates planned for 1983.

Table 4

Planned production growth rate	Enterprise breakdown (in percentages)
a. up to 104 percent	21
b. from 104 percent to 107 percent	23
c. from 107 percent to 110 percent	30
d. from 110 percent to 115 percent	11
e. more than 115 percent	15

Question 3

Does your production volume planned for 1983, first quarter, have a guaranteed supply of materials?

Nearly 60 percent of the enterprises reported having supplies of materials to cover their first-quarter production plans. The other enterprises indicated recurrences of serious difficulties in this area.

Selected responses follow:

- Supplies of materials for production in the first quarter of 1983 are secured in approximately 70 percent. We have not received confirmation on deliveries of primary raw materials and intermediate materials, principally those coming from imports.
- Our enterprise has no coverage (for its orders placed with suppliers) for approximately 30 percent of its total requirements for materials. Moreover, some supplies are accepting orders with no guarantees to keep delivery deadlines.
- Our initial orders were accepted, but no confirmation on quantities was received from the suppliers. There is uncertainty on imported materials because of the difficulties in securing foreign exchange and a generally unclear import situation.

Question 4

Does your enterprise anticipate any revisions in the price of its products in 1983? If so, what is the range and causes of such price changes?

The answers indicate that nearly 62 percent of the enterprises expect to raise, and 6 percent, to lower their prices. The remaining enterprises plan no change adjustments in prices of their products.

Among the causes of price increases, top ranking is given central decisions including increased in official prices and rates (38 percent of the

enterprises), increases in ZUS [Social Security Agency] (12 enterprises), increases in turnover tax (4 enterprises), reduced subsidies (2 enterprises), and the new principles for setting regulated prices (1 enterprise).

In three cases, wage increases were listed among the causes for price increases.

Question 5

Does your enterprise anticipate a reduction in employment? If so, please describe the extent and reason for the reduction.

Data provided in the poll responses can be compiled into a table showing employment shifts planned by enterprises for 1983.

Table 5

Changes in employment	Enterprise percentage breakdown
a. increase in employment	30
b. employment maintained at 1982 levels	42
c. decrease in employment	28

The table indicates that, if the above proportions are achieved in the entire economy, employment stabilization at the 1982 level can be expected.

Question 6

Are increases in emoluments anticipated in your enterprise? If so, to what extent?

More than 95 polled enterprises are planning increases in emoluments for 1983. The poll data indicates that:

--34 percent of enterprises assume a lower rate of growth in emoluments than in production,

--29 percent of enterprises assume that their rates of growth will be 0-5 points higher in emoluments than in production,

--37 percent of enterprises assume that their rates of growth will be more than 5 points higher in emoluments than in production.

Question 7

Does your enterprise intend to take measures to improve product quality?

A decisive majority of the enterprises see measures intended to improve product quality in 1983 as closely interrelated with improvements in the supply of raw and intermediate materials; many believe that product quality depends on coproduction and trade, and not only the producer alone.

Here are some sample answers:

- The enterprise is involved in various efforts to improve product quality, as evidenced by the number of quality grades (Q and I) and distinctions awarded to products and subassemblies we manufacture. Product quality has been strongly affected by a new-bonus-granting system introduced last year under which 50 percent of statutory bonuses is dependent on the quality of workmanship. Our efforts geared toward product improvement are continued and steadily improved in relation to state of the art achievements in the world in our field.
- Our enterprise strives for better product quality by perfecting engineering techniques applicable to its output. In 1982, despite the difficulties existing in 1982, the enterprise significantly improved the quality of its products which we desire to maintain in the current year while seeking other avenues for improvements in quality, including the establishment of an incentive wage system.
- Problems of quality improvement are subject to regular analysis in our enterprise. Specific actions are taken, stimulated by the need for a full range, reliability of operation, and modernity of our products to meet the requirements of domestic and foreign customers. Specifically, measures are being taken in the following areas: design modification, production techniques, quality control during production cycles, adjustments resulting from user experience, and assignments of bonus-type tasks.

Question 8

Does you 1983 plan assume increases in exports?

Among the polled enterprises, 72 percent assume increased exports, 5 percent plan stabiliziation and 23 percent plan reductions in exports.

It is notable that more than 40 percent of the enterprises plan export increases in excess of 10 percent for 1983.

The foregoing analysis of the consultant enterprise responses to the January poll cannot constitute a basis for far-reaching generalizations because of the narrowly representative and numerically limited sample.

It should be emphasized, however, that the enterprises' relatively optimistic forecasts are developed and applied in an atmosphere of expectation of economic conditions to stabilize.

These expectations embrace stabiliziation of material conditions, primarily in supplies, as well as systems-type conditions. Hence, it is now necessary to attach major importance to stability of economic solutions and to hold to a minimum all indispensable systems-type revisions. Otherwise, rather than setting their policies for extended periods, enterprises will tend to focus on "casting about for opportunities" and on taking advantage of each systems-type revision to realize ad hoc gains.

SEJM SOCIOECONOMIC COUNCIL DEBATES 3-YEAR PLAN

Warsaw ZYCIE GOSPODARCZE in Polish No 16, 17 Apr 83 p 2

[Article by Grazyna Smulska]

[Text] "...Members of the council are obliged to carry out objective orders. We represent the people's point of view and that is why it is most important for us to know what the state documents can tell us about the role of the worker, farmer and homemaker...."

With these words, Prof Jan Szczepanski, chairman of the Sejm's Socioeconomic Council, opened 2 days of debate. Presented to the council were documents on projects under the National Socioeconomic Plan for 1983-85 and also an anti-inflationary and savings program. Two opinions were presented for discussion, which had been prepared by teams.

Absolute priorities are improvements in economic life and apartment construction. Thirty percent of the capital investments will be earmarked in these two areas. Thus, the council heeded these issues. To these two issues, which were recognized as important and in accordance with the Sejm's intentions as expressed in the National Socioeconomic Plan, was added environmental protection, despite opposition from the Planning Commission's vice-chairman, Jerzy Gwiazdzinski. The council stated that financial means had to be increased to halt the most threatening instances of environmental degradation.

Minister Gwiazdzinski, who presented the National Socioeconomic Plan not so much as a collection of specific goals and tasks, but rather as problems ("...we must give up something"), wanted to know which aspects the council planned to drop.

Prof Henryk Zimny from SGGW-AR in Warsaw spoke out against such "pigeon-holing" of problems. He stated that problems in economic life and apartment construction cannot be resolved without dealing with environmental protection, as the ecological crisis is greater than the economic one. This is proven by the dying forests, poisoned water and soil, and polluted air. We now rank among the worst in the world in these areas. In order to halt further harm to the environment, we shall have to earmark in the next 3 years not 80 billion zlotys but rather 180 billion zlotys.

The council rated positively the level of outlays earmarked for agricultural production. In the council's view, the least expensive means by which to achieve additional production is through full utilization of agricultural uses.

Other postulates voted on by farmers and confirmed by opinion were criteria for use of nitrogen-phosphorous-potassium [NPK] per hectare, planning for microelemental deliveries, introduction of contractual mechanisms guaranteeing the reliability of sought-after agricultural products, stability in the eventual realization of regulations concerning the delivery of production means for agriculture, the creation of conditions facilitating the development of a service industry for agricultural needs and the harmonization of development between agricultural production and the food industry so as to avoid waste of agricultural products.

In the view of Jan Faber, a farmer from the Krakow Voivodship, the tax equalizing above-average incomes (1.5 times the average pay in the collectivized economy) causes farmers to resign from specialization in production, and without specialization, agriculture cannot develop. One cannot remove the perspective of modern farming.

"The farmer is not worse than the urban inhabitant," stated Leopold Mierzewski from Lublin Voivodship. "He would like not to be worse. To have a television, washing machine, and not just a machine for doing whatever. The countryside will lose people if it is not looked after."

"There are enormous reserves in agriculture," emphasized Stanislaw Stasiak from Wloclawek Voivodship. "For example, porkers are fed so irrationally that fodder used to feed three porkers should be sufficient under normal conditions for four through use of protein additives. Because we do not have these additives, grain is wasted."

"Supplies really have improved in some areas," acknowledged Jan Olejniczak from Leszno Voivodship, "but it is difficult to get excited about it because there are still shortages of basic tools: plow blades, spades and forks. Can we not produce these things?"

The farmers' viewpoints can be multiplied. Beets are wasted because there is nowhere to process them. We are a potato power and yet we have to import starch. The plan does not consider the building of new sugar beet processing plants except for Gliniojecka nor of a potato plant. Minister Gwiazdowski confirmed that these issues will depend on the decisions made by the banks as to whether these capital investments will be undertaken.

The National Socioeconomic Plan states that there will be 180,000 to 200,000 new apartments every year. A change in the building structure is also anticipated. Private homes will increase from 50,000 to 70,000.

A particularly ambitious undertaking ratified by the council is reducing the cost of constructing each square meter by 5-10 percent in 1985. However,

in order to accomplish this, basic changes will have to occur not only in the construction place.

The designer must give birth to material- and energy-saving construction. A thorough analysis of the optimum building cost also would help. Large-scale technology requires successive modernization. Construction cannot begin on untreated land, and expenses must be more rigorously anticipated for every new installation. In order to achieve higher efficiency in building construction, it is necessary to strengthen the role of mechanisms motivating higher quality and preservation of materials, and guarantee the preparation of qualified personnel.

An excellent example of the problems associated with apartment construction was cited during the council session by Eugeniusz Gruda, foreman from KBM [Committee for Apartment Construction] in Warsaw-South. Opinions on this issue were expressed in 21 enterprises and among 28 union delegations from Warsaw, and also experiences from 31 years of work in construction were related.

E. Gruda agrees that a lowering of costs is possible, but not when prefabricated products are transported distances of 35 and even 50 kilometers, and 25 percent is broken on the way. The greatest stumbling block, however, is not knowing the cost of construction and the cost of technology; which one is cheaper, which one is more expensive? After all, the funds are earmarked for apartment complexes.

Therefore, builders do not know the cost of a house they are building. On the other hand, members of cooperatives and candidates for membership in an apartment complex cooperative know it only too well. They feel the rising cost in their own pockets.

A proposal was introduced calling for an increase of 40 percent in the share of apartment capital investments, but this came under doubt as it would mean an increase of up to 15 percent in construction costs for tenant cooperatives and 30 percent for owner cooperatives. The council confirmed that the increase in cost of apartment construction is very high. Through increasing costs, an apartment will become inaccessible for many groups of people, among them young families.

In the opinion of the council, it would be useful to increase over the amount anticipated in the plan for individual construction toward general construction. The council also confirmed that there should be a separate collective sector in long-term planning for apartment construction. This would allow for an established period of time in waiting for an apartment. At the same time, the council did not recognize the basic growth of state subsidies for renovation of state and private buildings. Their costs should be covered by rents.

One of the conditions required to implement the National Socioeconomic Plan and one of its goals is to increase labor productivity. But what is to

motivate people to work harder? The council stated the following: "Recognizing as essential for the implementation of production tasks the setting into motion of incentives, the council stated that it can see a danger of decreasing efficiency in undertaking an anti-inflationary program.

The greatest reservations and doubts were generated by statements concerning taxation at various levels (tax on crafts, "wealth," "higher level" consumption) of income and earnings. Aforementioned Eugeniusz Gruda observed sarcastically that no tax is proposed for loafing, thriftlessness or poorly tended fallow land, but rather for honest work.

Many speakers raised the issue as to whether this is the best way toward a "more equitable spreading out of the costs of the crisis," as stated by Minister Gwiazdzinski.

The council, recognizing these doubts, expressed the view that it is necessary to institute a stable fiscal policy that will stimulate a constant growth of production and services in the market, and also in the noncollectivized sector. After a stormy discussion, a statement against exceptional wealth was issued, but it still was not very precisely formulated.

Also after a "hot" discussion, it was accepted that a compensatory tax should be set at three times, not 1.5 times, that of an average salary. Many of the council members were against this tax plan. But this problem, like many others discussed in the council, will come up again when the government proposition begins to take the shape of a proposed law.

The council stated that specific notions should be made for exceptional products. Taxes on luxury objects can distort consumption in an undesirable direction. It would be much better--stated the council--to put higher prices on these products. For example, color televisions and black and white televisions use the same amount of electricity. And higher costs of electricity for one over the other should not be introduced, but rather a higher cost for color television over black and white television should cover its higher quality. The council did not find a basis to increase taxes for hunting weapons because this could interrupt this area of the economy. (This issue was discussed by farmers and forest-rangers.)

"Tight money" will concern not only people, but also enterprises. An anti-inflationary program sets goals in this area, among others for the banking system. The council stated that these plans are not specific enough. Credit policy should be discussed by vice premier Janusz Obodowski in his speech to the Sejm.

("Tight money" is an increase in the enterprises' own share of their expenses; grants of credit to enterprises are conditional upon their increasing output and production standards; those enterprises producing products of poor quality will be cut out and their credit withdrawn.)

The most important task in implementing this anti-inflationary synchronization in the enterprises is to equalize salary levels with work output.

Solution of this problem is the bottom line for implementing the program, in addition to rational employment, reduction of the size of the central administration, and also of enterprises.

During the discussion in council, one of the members pointed out the unfavorable atmosphere existing toward white-collar workers, but Prof Szczepanski added that improved administration should go equally toward building their respect.

Fighting with an overgrown administration should begin by verifying which social work is useful and which one is not, stated Prof Szczepanski. Right now the number of people working who duplicate the same work should be reduced. Very often one administration works for another administration.

Members of the council discussed in great detail the possibilities for increasing supply. The plan for 1983-85 calls for an increase in goods and services of 700 billion zlotys, or 24 percent; however, per inhabitant this comes to 21 percent. Producers do not trust these figures. Nobody could say how this task will be realized. An increase in market production is supposed to be considerably higher than material production in general, but the structure of the economy does not favor this.

Recently the council confirmed that one should "anticipate an acceleration of the restructuring of national wealth and specify the necessary means to that end." In turn it will be necessary to undertake rapid action to supply the market in the areas of production and services. However, this requires a clear definition of capital investment directives. And this clarity does not specify central planning of a pro-inflationary nature. (The example of the Warsaw subway came up frequently in the discussions.)

The council also paid a great deal of attention to the necessity of counter-measures to combat unused production, among others in the areas of supply and capital investments.

"What is our economy?" asked Prof Szczepanski. First, it is a political and ideological model. Second, there are economic mechanisms, such as payments, prices and taxes. These issues have been written up carefully in the government's program, but is their regulation adequate?

The third part is technique--transport, production, construction. We should carefully decide how to modernize the economy's equipment, and also how to use its technique in a proper manner. It is frequently destroyed without thinking. We should speak more about the fight with thoughtless destruction rather than about the fight with waste. For example, is there no way we cannot avoid ruining freight cars during removal of goods?

In the end, the economy is people. Institutions, organizations, positions, governmental structure. So goes the economy as people behave. And changes in the economic system or in technique do not help unless there are changes in the system's social functions like personnel or carrying out of obligations.

Many of these thoughts were adopted by members of the council. And also the council expressed the view that victory over inflation and installation of new mechanisms for guiding the economy must be tied to a decisive and consequential fight with waste of work time and waste and thoughtless destruction of goods and materials, not to mention the production of bad quality.

These pathological phenomena can be found in systemic, technical and social causes, and above all in human irresponsibility. Their fight requires the implementation of harsh, repressive means. Without the effects in this area of economic equalization, sooner or later, it will fail. In the view of the council, the government should still this year work out counteractive measures.

In order to summarize as briefly as possible the course of the debate at the council, it is necessary to state that there were more questions asked than answers given. Maybe this is the council's function--to raise questions about weak areas and threats, and help the Sejm to formulate correct decisions.

9807

CSO: 2600/778

EXPANSION OF SEJM SOCIOECONOMIC COUNCIL ANNOUNCED

Warsaw TRYBUNA LUDU in Polish 13 Apr 83 p 2

[Interview with the assistant speaker of the Sejm, Zbigniew Getrych, by PAP correspondent Maurycy Kamieniecki: "Intended Expansion of Socioeconomic Council"]

[Text] The Sejm Presidium intends to address the parliament with a request to expand the PRL Sejm's Socioeconomic Council to 150 members.

PAP's parliamentary correspondent addressed the Sejm's assistant-speaker, Zbigniew Getrych, to obtain an explanation of what has motivated the above request. Speaker Getrych was at the birth of the council as he was chairing the work of the Sejm commissions over a year ago. Already then these commissions considered the concept of such an advisory-consulting body. Their considerations did encounter considerable doubts.

[Question] The decision to create the council was made by the Sejm a year ago. The Sejm recruited the members of this council in July and then it added some more members. The council has been working since September. Only 108 out of the 120 positions have been filled (the remainder are being saved for members of the trade unions). What is the reason for the proposed expansion of the council?

[Answer] We would like to have more complete participation of union and social organizations. The Sejm has for a long time now been receiving the motions from the various committees and organizations to expand the council. These motions were motivated by the desire to present the people's own stand on various problems, as the Sejm is presently considering those matters which are of particular interest in professional circles. We think the expansion of the participating organizations, communities and work forces [crews] has been justified by the fact that members of these organizations would be then able to participate in the operations of the Council.

Among other groups, we would like to include a few of the village organizations, to create 16 positions for the people representing the crews of various enterprises, economic organizations, etc. An additional five of the possible 30 new positions on the council would be reserved for the trade

unions. The acceptance of our discussed proposal would mean that 69 council members would come out of the enterprise work-crews and of other economic organizations, in that 35 would come out of the villages and agriculture, 4 out of crafts and trade, 8 out of the [small industry] cooperatives, 19 out of the socioprofessional and youth organizations as well as the creative and scholarly circles; the remaining 15 positions would be reserved for trade union representatives.

[Question] Are some members not uneasy at the meetings of the council when one of them says what he thinks about the specific proposed legislative solutions? Is the degree of cooperation between the parliamentary commissions and the Sejm Presidium Council considered adequate?

[Answer] At first there were really different problems and misunderstandings on both sides. The envoys thought that their level of knowledge of the individual problems ought to have been sufficient. On their side, council members were displeased by the lack of direct contacts with envoys of the Sejm.

That was the situation at the very beginning. As is in every new case, what was needed was the smoothing off of the contacts, outlining of the ways of action and of the rules of protocol. As of late we very rarely observe these types of difficulties.

Usually we manage to submit all the matters to the council before these are to be considered by individual commissions. These matters range from important proposals and legislative projects to the various programs of domestic activity. This process is very important both to the council as well as to the Sejm. We managed to reach an agreement in this matter, assuming that emphasis is placed on important matters and not on all the matters.

The council became a well recognized body of the Sejm and its opinions enjoy respect.

[Question] In addition to the issuing of their opinions on the legislative proposals have the members of the council undertaken any action on their own initiative upon any matters considered essential by them?

[Answer] No, at this moment not yet.

9934

CSO: 2600/766

CREATING OUTLETS FOR PENT-UP DEMAND TERMED CRUX OF 3-YEAR PLAN

Warsaw POLITYKA in Polish No 14, 2 Apr 83 pp 1,2

[Article by Zygmunt Szeliga: "More Outlets for Money"]

[Text] If I could express in one sentence the most important reason for our government's anti-inflationary program just brought to the Sejm, along with the National Socioeconomic Plan for 1983 to 1985 and the economy program, I would say that it is the search for new outlets for the flow of money coming onto the market.

Inflationary processes of a different scale have ruined our economy more than once in the past. Moreover, they are the rule everywhere in contemporary world economics, and it is highly probably that there is simply no completely effective remedy for them. But the inflation scale and means of opposing its negative effects on societal life are crucial (for, I would mention in passing, they also have their positive effects: in particular, inflation may--or may not--stimulate economic life).

In our country a serious intensification of the inflationary process dates from the second half of the 1970's. Of course, I have in mind here the essence of this process and not what is commonly understood by the word inflation. Its essence is always a disproportion between the flow of money that finds its way into the consumers' pockets and the flow of goods and services these consumers would like to spend their resources on. The external manifestation of this process is price increases--and that is what is commonly acknowledged as inflation.

The distinctive feature of our inflation in the years 1976 to 1981 was that as the actual inflationary process set in, the gap between money and goods and services increased month by month and year by year, while, on the other hand, there was no proportional reflection of this in price movements. In the 1970's, inflation was a taboo subject; so was the word "illicit." Once prices were not performing their function of balancing the two streams then the actual process of inflation had to appear externally in other forms. First of all, in the mushrooming queuing up for goods, and then extending the rationing system and similar pathologies of economic life--I stress the word pathologies -- for indeed they are real illnesses. Some of these pathologies, such as the phenomenon of speculation and the absurd price levels in the automobile market, amaze public opinion and are in a marginal way particularly onerous or criminal in nature.

Unfortunately, the long years of our own hypocrisy of inflation, that is to say, our shunting of inflation from price movements onto such external forms as queues and ration cards has this fatal consequence: it has thoroughly warped our social consciousness. Today, like it or not, the majority of people regard queues and rationing as normal and think that pathology is just speculation in various forms which require more and more severe punishments and administrative prohibitions.

A few years after inflation stopped being a taboo subject we still continued to think somewhat in the same old groove. The idea of balancing the market as the first and basic step, in a general way, toward making the economy healthy and creating the likelihood of reducing inflation to socially acceptable levels has had a difficult time in reaching our consciousness. It has also been difficult as well for the government which has kept in mind the difficult living conditions for the average citizen and would like to offer something more than just a balance attained through price increases in crisis conditions of dwindling production and supply.

Let us further add that in the course of a decade there has been formed in the consciousness of our society, as well as among the authorities and economists a rather conventional idea of economic balance. Only two existing traditional streams are perceived: money, and goods and services. All activities that favor bringing about their convergence are virtually restricted to the traditional area of production, supply and wages.

Only recently have there begun to appear departures from this traditional way of thinking; an anti-inflation and economy program gives hope for a basic change in these conventional approaches, which is, first of all, taking place in government circles and then--let us hope--in societal attitudes and behavior as well.

This is happening in large degree under the influence of objective necessities. In the course of working on the drafts of the NPSG /National Socioeconomic Plan/ for 1983 to 1985, it has become clear that under existing economic structures we are not going to succeed in ensuring sufficient growth in production and supply. We are too restricted by production factors and, above all, by delivery of raw materials.

It is also clear that it is impossible to have a large-scale deflationary policy that would have to be based on a reduction of nominal wages and earnings.

Consequently, one has gotten the picture of the extremely unhappy prospect of a renewed inflationary spiral--and on a grand scale to boot. Some predictions have it that in 3 years one can expect a 75 to 80 percent increase in the flow of money, while the flow of goods and services will increase by 24 percent. Continued spasmodic maintenance of a traditional balance would produce either close to a 20 percent annual increase in prices (and this without any guarantee of stabilizing the market in relation to the imbalance at the starting point) or a further development of rationing and other onerous burdens of daily life.

Does this inflationary program avert these threats? Obviously not. One needs to regard its proposals not as a full cure but, above all, as an indication of the trends in thinking about these problems and finding new solutions to them, especially in unconventional areas that go beyond the traditional view of a flow of goods and money.

These ideas are very close to those ideas presented in our weekly. Already in the 1970's, I waged a campaign in these columns for the creation of the opportunity to make additional money (in exchange--I probably do not need to stress this-- for profitable and socially useful work). Now this idea had found full acceptance in the anti-inflationary program and there is even talk about a need for revision of the Work Code which has created certain limitations in this area.

"Public enterprise" has been generally accepted into the government program-- at that time I proposed a passage of a special law guaranteeing everyone the right to undertake an enterprise. Now if the Sejm accepts the government anti-inflationary program, such a law will become a fact.

There are also propositions in the program dubbed euphemistically as unpopular. They especially concern the quantity of money. It is difficult to think of reducing nominal earnings or social services--neither one of them, you know, is exorbitant in relationship to price levels--but one needs to give serious thought to a further increase of this flow, as well as to various irregularities that have been shaped historically, especially in the area of different kinds of work privileges.

In my opinion, both aspects of this anti-inflationary program should gain approval not as a temporary action connected with the crisis but as a completely new and permanent approach to solving socioeconomic problems. If we want to create conditions of economic balance on a permanent basis (and this means a social balance not only in Poland but in other countries as well), we must do an outstanding job in broadening the outlets for the flow of money.

Not only our recent experiences but those in the past prove emphatically that in traditional structures of supply and consumption it is not possible to create a coherent motivational system that encourages high level activity and production and the earning of money. Lacking such a system significantly reduces production capabilities, and, hence, the inflation spiral turns in the opposite direction: production does not keep up with demand.

This matter is not limited to marketing goods--although our actual reserves in this area are still large. We do not really have a housing market, nor do we have one for telephones, and the motor transport market barely limps along. Each of these areas can and should become an outlet for many billions of zlotys, and then become a "promoter" in its own right of production activity (what I am saying here is that there exists a regular "philosophy of economics," attested to by every citizen: The wish to possess a much-desired good induces better work and higher output).

Also we must as a necessity find still other outlets for money acquired as a result of increased production and output. In particular, the big economic problem in Poland is the creation of some kind of coherence between increases in wages and incomes and national economy investment needs. Simply put: it is a question of directing a part of our citizens' resources into investment needs; of course, this does not take in housing needs. Moreover, there can be no coercion in any form, that is to say, the state cannot limit consumption in favor of investment.

This is an idea for the somewhat distant future; however, the anti-inflationary program is not just a matter of the moment but, in a general way, a part of a new way of thinking about socioeconomic problems.

9866

CSO: 2600/710

FUEL-ENERGY PROBLEMS ASSESSED

Fuel-Energy Reserves, Program

Warsaw NAUKA POLSKA in Polish No 3, Mar 82 pp 99-112

[Article by Aleksander Dlugosz and Roman Ney, corresponding member of the Polish Academy of Sciences: "Poland's Fuel-Energy Problems"]

[Text] Prefatory Remarks

The proper operation of the national economy serving to meet the indispensable needs of society hinges on many factors. Without going into detail, mention should be primarily made here of a broadly conceived raw materials base with special consideration of fossil energy sources, agriculture and the associated processing industry, the industrial potential with allowance for its modernity and structure, organization at all levels of management, familiarity with world economy serving to master the current situation and purposively select optimal and real solutions in discrete subsectors of the economy. All this is also of extremely great importance to meeting the non-material needs of society as regards public health and natural environment, a broadly conceived recreation and sports, culture, education and science.

An important aspect is systematic conduct of forecasting work with respect to individual domains of the economy as related to worldwide trends.

To this end it is indispensable to operate with developed variants of solutions based on accurate data from all industrial subsectors that allow for their inter-relationships as well as for external determining factors ensuing from the world economic and political situation. A fundamental element of these solutions or variant-type concepts should be the goal of a far-reaching economic self-sufficiency of this country and the granting of preferences to the national economic subsectors for which domestic raw materials and technologies are available and which are indispensable to meeting the needs of society or highly profitable as regards foreign trade.

As noted above, this concerns purposively selected development directions rather than those forced by necessity ensuing from external determining factors. This is a difficult problem, but one that has to be tackled without delay. There is no sense in further elaborating on these remarks, since they concern widely known matters.

In our further reflections we wish to concentrate on the nation's fuel and energy problems. It would be a truism to argue that Poland's fuel-energy base is a factor that in practice restricts a broadly conceived development of industry, agriculture or even consumer living standards. Poland--like the entire world,

besides--exists in a certain fuel-energy situation. That actual situation has to be the point of departure for the subsequent reflections as well as for working out concepts of variant-type solutions being discussed among competent experts when selecting the optimal strategic solutions for the development of the national economy.

Particularly essential are:

- insofar as possible, an unambiguous determination of the fossil fuel resources and of the possibilities for extracting them within specific time frames, e.g. until the year 1985, 1990, 2000 or even 2020;
- the drafting of the nation's fuel-energy balance;
- a penetrating analysis of the current management of domestic and imported raw materials in the sense of the effectiveness of their utilization in discrete technologies, with allowance for energy efficiency;
- An extremely difficult problem, which in the past has been repeatedly attacked without meeting the planned assumptions, is the problem of the conservation of fuels and energy. This can be accomplished through a systematic reduction in the energy-intensiveness of a broadly conceived national economy;
- a detailed analysis of the possibilities for supplanting raw materials used in discrete technologies, with the object of streamlining their use;
- identification of users who have to be supplied with scarce fossil energy sources (crude oil, natural gas);
- determination of the directions of the processing of coal adequate to the demand for particular types of products: solid fuel, gaseous fuel, chemical raw material (tar, benzene, gas, etc.)
- determination of the possibilities for and quantities of imports of crude oil and gas;
- an unambiguous determination of the quantity of energy yielded by developing the nuclear power industry within particular time frames.

Poland's Reserves of Fossil Energy Sources

Poland is endowed with a fairly specific base of fossil energy sources characterized by considerable reserves of hard and brown coal, limited reserves of natural gas and a nearly total absence of crude oil. Proved recoverable reserves as of the end of 1981 amount to 61 billion tons of hard coal, 13 billion tons of brown coal, 6 million tons of crude oil and 180 billion standard cu m of natural gas. It is worth noting that nitrified natural gas with a lower calorific value occurs in the Polish Lowlands, accounting for about 55 percent of the proved reserves.

On the basis of the latest geological surveys, the long-range reserves of hard coal can be estimated at about 124 billion tons; brown coal, 25 billion tons; natural gas, 500-700 billion standard cu m; and crude oil, 50-80 million tons. But as regards natural gas and, especially, crude oil, the transition from long-range reserves to recoverable reserves will be extremely difficult.

There is a very great likelihood that hard coal extraction will not markedly increase in the next 5 or even 10 years. This ensues from the accessible front of extraction, which is shrinking, especially as regards the mines located in the northern marginal part of the Upper Silesian Coal Basin. The reserves of the Lower Silesian Coal Basin also are becoming depleted. This is compounded by the strivings toward a 5-day work week and the limited chances for introducing--as yet unknown--radical changes in coal extraction technologies with the object of substantially increasing coal extraction and improving the utilization of deposits.

In the next few decades the depths of extraction in mines outside the areas named above will have to be increased and a broad program for building new mines, both in the Upper Silesian and the Lublin coal basins, will have to be implemented. These are costly projects and, given the current economic situation of this country, they have to be carried out on a reasonable and justified scale.

The cost of black coal extraction also is steadily, and even disturbingly, rising. All this nullifies, once and for all, the previously proclaimed thesis of the low cost and high abundance of hard coal and necessitates rational management of this raw material.

There are chances for increasing the extraction of brown coal to about 80 million tons on the basis of the Belchatow Open-Strip Mine, now under construction, where ultimate yearly extraction will be 40 million tons. Once certain currently exploited deposits become depleted, it will be necessary to start the construction of another brown coal open-strip mine.

The extraction of high-methane natural gas in the next few (5 to 10) years will in the best case persist at its present-day level. This is a logical deduction from the proved reserves of the gas and the relatively low chances of discovering new sizable deposits (reserves of several dozen billion cu m). Given the current exploration rate, all that can be expected is a slight increase in the extraction of nitrified natural gas, which is of limited usefulness.

This situation is also due to the disturbing decrease in the scope of drillings and geophysical surveys in recent years, along with considerable shortages of equipment.

In addition, the Polish petroleum industry, and especially prospecting for crude oil and gas, has been adversely affected by its excessively frequent reorganizations.

A major complement to the balance sheet of natural gas is coke-oven gas, whose quantity may, however, diminish in the next few years unless new coking plants are put into operation. The currently operating coke-oven batteries (other than the Byproduct-Coke Plant in Zdzeszowice and, partially, the coke-oven batteries in Walbrzych) are largely worn and their operating efficiency will diminish. Other gases--blast-furnace gas, mine gas, and small quantities of gas produced in old urban gasworks--are not major factors in the national balance sheet.

An important item is imported high-methane natural gas, but it is difficult to expect a substantial increase in these imports.

Thus, the situation as regards the supply of natural gas is becoming increasingly difficult. A not unimportant factor was the hasty shutdown, in the 1970s, of more than 90 gasworks generating combustible gas from hard coal. This resulted in reducing gas output by 450 million cu m, which was offset with natural and coke-oven gas.

A rapid solution of the problem of the nation's supply of natural gas and its substitutes is a highly important problem at present. Otherwise, our economy will be menaced by serious complications.

The proved reserves of crude oil are insignificant. The prospects for the discovery of new substantial deposits are small, too. The forecast can be hazarded that during the next 5 years crude oil extraction will average 300,000 to 400,000 tons annually. A peak of about 800,000 tons may be attained in the 1990s, but only on condition that prospecting work be expanded and crowned with success. It should be borne in mind that so far none of the targets for crude oil extraction in the long-range plan has been accomplished.

These particular types of fossil energy sources have evolved almost in a random manner. They have been utilized in an uncontrolled and incorrectly programmed manner.

Another factor that played a major role in the utilization of fuels and energy has been the prices of fossil energy sources and energy itself prevailing in the years past. Their low prices and hence also their low share in the production cost, prompted their virtually careless and profligate consumption and the expansion of energy-intensive industries. When selecting technologies, the fuel-energy aspect has hardly been duly analyzed in the past.

Energy-Intensiveness of Polish Industry

Poland's national income is distinguished by its extremely high energy-intensiveness. By way of an example, every US\$1,000 of generated national income in Poland is achieved at the cost of 1,290 kg of standard fuel compared with 1,096 kg in Hungary, 634 kg in Austria, 576 kg in France, 614 kg in the FRG and 806 kg in Sweden. This is due to the high energy-intensiveness and materials-intensiveness of our industry whose energy consumption on the average is greater by a factor of 1.25 to 3 than that of foreign producers.

At the same time, as regards consumer living standards, the consumption of fuels and energy in Poland is lower than in other developed countries, owing to the relative modernity of these items. By way of an example, the amount of natural gas consumed per capita by consumers in Poland in 1978 was 37 cu m compared with 1,013 cu m in the United States, 164 cu m in the USSR, 221 cu m in the FRG, 177 cu m in France, 464 cu m in England, 168 cu m in Italy, 103 cu m in Czechoslovakia and 100 cu m in Hungary. The consumption of electricity shapes up similarly. Despite the considerable energy-intensiveness of Polish industry, the consumption of electricity per capita in Poland is low. In 1980 it was 2,802 kwh, which ranks our country in the 18th place among 26 European countries. After 1980 this situation deteriorated: we dropped to the 20th place in Europe.

It should be borne in mind that neglect and the lack of technological culture and discipline are nearly of equal importance to industry so far as excessive energy consumption is concerned. These factors are underestimated in most industrial subsectors, but they must be eliminated both through proper training of work-

forces and the introduction of the necessary economic incentives: cost-effectiveness analysis should be extended to the workstation.

As noted previously, the present fuel-energy situation is also due to the lack of a clear and rigorously followed program for the utilization of fuels and energy. The situation in this respect can be regarded as an emergency one, just good enough for surviving or at most enduring. In the existing fuel-energy and economic situation even an extremely large increase in the extraction of the sole major Polish fossil energy sources, namely, hard and brown coal, can bring only short-lasting relief. For it will merely serve to meet more fully the domestic demand for this fuel and make possible exports on which, in practice, hinges merely the preservation of our credibility as a trade partner. All profits from such exports will in practice be used to cover the country's payments on its foreign debt.

Here it is worth noting that in 1979, when Poland had exported 41.4 million tons of coal, it lost its positive balance of trade in fossil energy sources. The rise in the prices of crude oil and the stagnation of coal prices caused in that year a negative balance of trade in these sources, amounting to 1,145.5 million foreign-exchange zlotys. By 1980 this negative balance soared to 4,020.8 million foreign-exchange zlotys.

Thus while the export possibilities of our hard coal should not be disregarded, the oft-proclaimed thesis of the "omnipotence of the exports of Polish coal" should not be accepted as justified. In the present crisis period the importance of coal exports has to be appreciated but, once the economy stabilizes other more effective export possibilities based on products and commodities should be explored.

Determining Factors and Targets of the Program for Fuel-Energy Management

The preparation of a fuel-energy management program for the next 5, 10 and 20 years is urgently needed. Such work has been undertaken by a team under the Main Inspectorate of Energy Management and should be regularly conducted. Parallel to

this, within the framework of the Government Program PR-8 "Comprehensive Development of Energy Industry," forecasting work also has been undertaken.

The first work on the related forecasts had been undertaken at the Committee for the Problems of the Energy Industry, Polish Academy of Sciences [PAN], by a team directed by Prof. Kazimierz Kopecki. The first forecast was presented in 1978, but the then authorities did not infer any conclusions from them. Currently this Committee has presented another study, "The Energy Industry in the Crisis Period." It will be discussed and subsequently presented by the administration of the PAN to the government.

But all these projects are some 15-20 years late compared with the needs. Unless a state program for fuel-energy management is drafted as an emergency measure, the country's abnormal economic situation will not improve. Such a program should be systematically updated at least once every 5 years.

The program referred to must comprise two principal elements:

--the first, allowing for all the fuel-energy projects expected to halt the further decline of the national economy;

--the second, outlining the directions of economic development in the presence of a closed fuel-energy balance.

The entire problem of fuel-energy management and its development policy cannot be isolated from the overall concept of the country's development--a concept that also has not yet even reached the discussion stage. When drafting the program for fuel-energy management, the following problems have to be considered:

1. Our fuel-energy and chemical basis for the next few dozen years will be hard coal and brown coal. This logically ensues from the reserves of these raw materials. These valuable resources--hard coal and brown coal--are being extracted with a tremendous outlay of effort and funds. They are difficult to process compared with crude oil and natural gas but domestic conditions necessitate depending on coal and making it the principal raw material in our fuel-energy and chemical balance. Proceeding from this assumption, it is logically necessary to develop the chemical processing of coal, which in practice is non-existent in this country.

Or a second variant could be adopted: the fuel-energy and chemical balance could be based on the energy to be generated by the nuclear power plants yet to be built, partially on coal and to a large extent on imported crude oil and imported natural gas. Of course, such imports have to be offset by appropriate exports (imports of gas, crude oil, equipment needed to build nuclear power plants and fuel for these plants). Given our export possibilities, this second variant is highly debatable. Users of chemical raw materials will prefer crude oil and natural gas, since they are more attractive as raw materials than those processed from hard or brown coal. Nevertheless, hard coal is even now also prized by the world as a valuable chemical raw material.

2. The studies and analyses so far of fuel-energy management should be compiled and evaluated from the standpoint of their comprehensiveness, value, etc. Whatever is valuable and suitable in these studies and analyses should be utilized in drafting variant-type strategic solutions.

3. All programs and studies pertaining to the chemical processing of coal should be compiled and evaluated. This will result in determining the accomplishments so far in this field as regards basic and applied R&D work. The current utilization of hard and brown coal reduces in principle merely to combustion (public-utility power plants, heating plants, various industrial furnaces, and burning in household ovens), the carbonization of hard coal during the production of coke and the gasification of negligible quantities in the still operated gas generators, along with the degasification of small quantities during the production of city gas.

4. Since 1945 no new coal processing technology has been introduced in this country--the production of molded coke is chiefly based on carbonization--and, what is more, an overwhelming majority of facilities for the gasification of coal has been shut down, including even those serving to produce synthetic gas. No significant effective research and application projects relating to coal processing have been introduced either.

Neither can any major accomplishments be recorded in the fundamentally unified technology of coal processing used by the coking industry. In this field there

even occurred a marked decline compared with the technological developments in other countries. Poland is a major producer of coke and the coking industry is, next to public-utility power stations, the principal consumer and processor of coal. This important industry provides: coke, gas, tar, benzene and other semi-finished products. It is the basis of metallurgy and the supplier of substantial quantities of medium-calorific gas for the gas industry. In addition, it provides 0.7 million tons of tar serving as a source of valuable products and raw materials for further processing. At present, this industry is "developed" in a completely random manner.

When speaking of the chemical processing of coal and thus of the provision of a basis for other industries--which is justified--we have to consider the facts. As noted previously, Poland lacks a coal processing industry, aside from the coking industry. An attempt to create a substitute by producing synthetic gas by the Koppers-Tozek method had to be discontinued for various reasons. The present economic crisis also is not unimportant. And yet, an industry for the comprehensive processing of coal has to be established. The fundamental question is when and how? A reasonable answer can be obtained once--as was pointed out above--the specific needs of the national economy for the products of coal processing are determined along with the financial-investment possibilities for implementing this project.

5. It appears, however, that the following considerations are justified in our present situation. One of the basic strategic goals of Poland's economic development should be the striving to achieve energy self-sufficiency, at least to an extent assuring a secure economic existence of the country. The principal, accessible and certain raw material is hard and brown coal. The current--as of 1980--structure of primary energy consumption (in which hard and brown coal accounts for 78.8 percent; crude oil, 13.1 percent; natural gas, 7 percent; and other energy sources, 0.7 percent), will at best retain these percentile proportions during the next 5-10 years. In the event of a further decline in crude oil imports--which is likely--the share of hard coal will increase, because an increase in the quantities of combustible gases (natural and coke-oven) is not feasible in the near future. Increasing the extraction of hard coal will be extremely difficult in view of the current format of extraction and that expected for the next few years, and given a six- or even five-day work week. Thus, a rational utilization of coal and all coal derivatives should be the goal. This postulate is consistently repeated, with great fervor even, but in practice very little has been accomplished in this respect. Even if some concept is formulated, its implementation is far from easy. The logical conclusion is that the country's fuel-energy strategy should be worked out very meticulously and in different variants, and that the variant ultimately selected should be adhered to adamantly while fulfilling it.

6. In working out such a strategy, the following arguments should be considered:

a) The production of a domestic substitute for crude oil on the basis of hard or brown coal is not feasible in significant quantities for the next 15 years. This is due to the absence of a process with an appropriate technological and economic level.

Given the current technologies, the approximate consumption of coal per ton of crude oil thus produced is as follows:

--direct charging	-2.2 tons of coal/1 ton of crude oil
--for production of hydrogen	-1.5 tons of coal/1 ton of crude oil
--for <u>electrical energy</u>	<u>-0.5 ton of coal/1 ton of crude oil</u>
Total	-4.2 tons of coal/1 ton of crude oil

For example, the production of 2 million tons of crude oil will require a total of $2 \times 4.2 = 8.4$ million tons of hard coal. The proceeds from the sale of the same quantity of coal could also serve to purchase about 2 million tons of crude oil. Besides, it is not certain whether such a quantity of coal could be set aside for processing into a liquid product. The cost of investing in and operating in the necessary facilities, as well as the cost of building new coal mines to meet the demand, would also be huge. But the assumption that crude oil would have to be imported to the extent needed for the normal operation of the national economy can be to some extent alleviated by the hydrogenation of the coal tar obtained when processing coal by a method being developed by the Institute for the Chemical Processing of Coal. However, in our opinion, this will not produce any significant effects until 1990.

It is expected that in the future, already after the year 2000, new technologies for the liquefaction of coal could reduce the coal requirement to 3 tons per ton of crude oil thus produced. Hence, this process will be more effective than the one known at present.

b) Uneconomical combustion of coal in highly inefficient old furnaces, especially communal ones, should be maximally restricted. The amount of coal thus burned with an extremely low thermal efficiency that is not more than 20 percent, and averages 16 percent, is estimated at about 30 million tons a year. But a rapid solution of this problem is difficult in view of the fact that this coal is burned in a couple of million relatively inefficient furnaces with an uncontrolled and unregulated excess of air resulting in incomplete combustion of fuel and an excessive and unnecessary amount of combustion gases and residues. A change in this situation is needed, and this requires drafting a detailed program of action which should allow for:

--production of new more efficient furnaces equipped with control and measuring instruments. This especially concerns the furnaces needed to provide heat to private or collective users;

--replacement of the solid fuel represented by hard coal with gaseous fuel or electrical energy, especially for private users residing in cities. The need to eliminate coal-burning furnaces for office and home heating is also dictated by ecological considerations;

--the combustible gas of high or medium calorific value needed for this purpose should be obtained through a more efficient utilization of this fuel by large-scale consumers--chemical and metallurgical industries--which currently consume about 70 percent of all natural gas compared with not more than 15 percent being used for communal purposes. There exists the opinion that the thermal efficiency of Polish gas burners--other than those used by communal consumers--is lower than in any other CEMA country.

One instance of inefficient utilization of natural gas is the combustion of about 700 million cu m of high-methane gas a year to obtain hot water for the pit mining of sulfur. This problem should be solved as rapidly as possible on utilizing for this purpose the heat of the Polaniec Electric Power Station now under construction.

Ultimately the demand for gas should be fully met by gasifying coal into, primarily, synthetic gas which is cheaper and simpler to produce, and subsequently into systemic gas if the need arises. The allocation of the thus produced synthetic gas to certain chemical-industry consumers will serve to relieve part of the natural gas and allocate it in larger quantities for communal purposes.

The above measures should serve to reduce the quantity of coal that is very inefficiently used by communal consumers and allocate it for more economical uses: gasification and carbonization.

c) When considering problems of fuel-energy management, virtually first priority should be given to the rational utilization and maximum conservation of fuels and energy. Current management of fuels and energy requires constant attendance to this matter. Given the shortages of fuel and energy, temporary restrictions are periodically applied to the quantities of electricity or combustible gas supplied. Users have developed programs for shutting down discrete equipment units or entire production flowlines in such situations so as to minimize losses. But such shutdowns augment the energy-intensiveness of production and thus also result in increased overall production cost.

Losses of production due to energy brownouts also are extremely large. For example, the curtailment of gas supplies by, say, about 20 percent causes the nation's industrial output to decline about 14 percent.

No major R&D work—with a few small exceptions—has yet been undertaken to streamline energy-intensive technologies and heating and power-intensive facilities or to shut down energy- and fuel-intensive heating facilities. It would seem that the decisive and saving factor in this situation would be the economic reform and the "third S" [self-financing of enterprises]. Nothing could be farther from truth. Uncontrolled unit consumption of fuels and energy and the stability of the prices of these energy sources regardless of their unit consumption will not be effective at all. There is a need for price differentiation. Once the indispensable technological level of the consumption of fuels and energy, as based on world indicators, is exceeded, the price of any additionally consumed quantities should progressively rise and affect the enterprise's profits instead of causing the prices of its products to increase. This is particularly essential during the present interim period when, in the absence of competition, enterprises are enabled to increase the prices of their products in order to compensate for losses due to technological shortcomings. This phenomenon is currently widespread.

Energy conservation through a reduction in energy-intensiveness is costly, but even so it is cheaper than obtaining new resources of fuels and energy. The adjusted cost of conservation amounts to about 2,800 zlotys per ton of coal thus saved, whereas the cost of opening and maintaining new coal mines is about 4,150 zlotys per ton of coal. The actual costs are even higher if the costs of transport, distribution and outlays on environmental protection are included.

d) The problem of producing biogas should be decisively tackled on using as raw materials sewage and other communal wastes as well as animal manure. Such raw materials could be processed into a gas having the medium calorific value of about 6,000 kcal/cu m, along with a solid residue that can be used as excellent soil fertilizer. The yield of gas per kilogram of the raw material may range

from 0.2 to 0.4 cu m. Such gas, produced in the neighborhood of animal farms or even within groups of private farms, or too in cities from sewage and other communal wastes, could be useful on a year-round basis for heating premises, cooking and even drying. The production of biogas is in all ways of interest, and it has even been patented in this country. But it is properly understood neither by gas users nor by gas consumers nor by gas distributors.

At present just one such facility is operated in this country, by a farmer in Nieciecza, Tarnow Province. The facility has fully justified itself and made the farm autonomous energy-wise.

This problem should be urgently considered, subjected to the necessary economic analysis and either discarded or be accepted for implementation. Acceptance would result in the drafting of a standard design and the commencement of the construction of equipment and facilities for the production and utilization of biogas. The utilization of biogas on regular and animal farms or in cities would also serve to reduce substantially the quantities of hard coal being burned with a low thermal efficiency.

e) The greatest effects, though, can be achieved by significantly modifying the technologies consuming the largest quantities of coal. One such major consumer of coal is the utilities. We are not experts in this field and we cannot make binding comments on these matters. Nevertheless, it appears that promising work has been done on the gasification of coal for gas-steam turbines, the intensification and control of the combustion process, and the preparation of raw material for that process. On the other hand, researches into the magnetohydrodynamic method (MHD) do not seem likely to lead to significant attainments.

f) The further decline and neglect of the byproduct-coke industry should not be permitted. This industry is important to the national economy; it has until recently been processing more than 25 million tons of coal a year and providing coke as a metallurgical raw material, and also coke as a smokeless fuel and a source of systemic gas of medium calorific value, tar, etc. Recently this industry has been completely neglected. There was no modernization of its technologies, and on the contrary they even regressed. For reasons that are not known more closely, the production of valuable chemical raw materials from coal tar has been discontinued. Perhaps the economic reform--if the three "S" [autonomy, self-government, self-financing] indeed apply to this industry--will rescue it, considering that this is a profitable industry that produces substantial profits to enterprises--profits which also should be utilized to modernize it.

g) The practical utilization of minor brown coal deposits for local purposes should be restored. In the past, small open-strip and even regular mines had been active in southwestern Poland, providing fuel to consumers and small-scale industry. At present this problem should be approached in an updated manner, on developing at the same time methods and equipment for briquetting brown coal.

The minor deposits of natural gas not included in the national balance sheet, which exist in both southern and western Poland, should similarly be utilized for local purposes.

h) The possibilities for utilizing geothermal energy in Poland should be elucidated. On the basis of known geologic survey of the country, it is even now possible to isolate areas in which drilling located favorable thermal conditions. A geyser of water with a temperature of 72°C has even been obtained from a

borehole in the Nowotarska Valley. The hydrogeological situation of that borehole warrants further drillings.

Once appropriate areas are isolated in Poland, their energy balance sheets should be worked out. The reason is that in most cases water will have to be pumped into some boreholes with hot water being obtained from other boreholes. Hence a comprehensive assessment of this problem is needed.

Also to be considered is the problem of the "small-scale electric power industry" based on local watercourses, especially in southern Poland.

All this however will be just a complement to the principal energy source represented by hard and brown coal.

1) When selecting the model of fuel-energy management the protection of natural environment should be considered. The greatest danger is linked with the burning of high-sulfur stoking coal and brown coal in electric power stations. Small private furnaces also represent a major menace. The desulfurization of coals and fly-ash has not as yet been resolved in practice.

A practical solution of the problem of recultivation of the areas of brown coal extraction, such as would result in the successive recultivation of discrete areas of mines while these are still in operation, also is yet to be achieved. In this respect a considerable backlog exists.

An important problem is the utilization of fly-ash from electric power plants, which could be used for the combined production of various kinds of building and road materials.

Thus, the use of hard and brown coal to augment the generation of electrical energy entails an ecological barrier which cannot be disregarded.

In presenting the above views and proposals we wish chiefly to emphasize the importance of the premises of a fuel-energy policy to the national economy as well as suggest certain directions of solutions. The drafting of a fuel-energy strategy and policy is a difficult problem but--as we conclude--it has to be done as soon as possible. This should be done within the community of experts in the planning, extraction, production, processing and utilization of fuels and energy. The program thus drafted should gain acceptance of all interested parties as a common mandatory task.

It is simply difficult to understand the causes of the various neglects and shortcomings in the utilization of fuels and energy. In every other country all programs of action and technologies for the production and utilization of fuels and energy are developed by competent individuals, who are not in short supply in Poland. We are deeply convinced that we have an extremely well-trained cadre of experts, valued and respected in even the most highly industrialized countries--a cadre that is capable of drafting and implementing logical and ambitious programs of action as regards fuel-energy management.

Elements of Program for Fuel-Energy Management

When working on a fuel-energy program, the following problems should be considered:

1. Domestic reserves of fossil energy sources and other energy sources:

- industrial reserves;
- geologic reserves;
- long-range reserves;
- the need to increase the coefficient of utilization of deposits;
- comprehensive utilization of fossil energy sources and accompanying minerals;
- changes in the technologies of extraction of fossil energy sources, increasing the depth of extraction of hard coal;
- cost of extraction of fossil energy sources.

2. Possibilities and directions of imports of fossil energy sources:

- crude oil;
- natural gas;
- nuclear fuel.

3. As regards coal combustion:

- the number and identity of users burning hard and brown coal;
- the transportation of coal to these users;
- furnace specifications, extent of combustion in different types of furnaces;
- thermal efficiency of these furnaces;
- side effects of the combustion of coal in these furnaces on the natural environment;
- latest world advances in the combustion of coal.

4. As regards coal degasification:

- quantity of the coal thus processed;
- resulting products and their utilization;
- profitability of the process;
- treatment of raw gas for own needs;
- treatment of coke-oven gas for the industrial network, profitability of this operation;
- use values of coke-oven gas and its evaluation;
- importance of coke-oven gas to the overall gas balance sheet.

5. As regards coal gasification:

- gas for energy industry: conversion of burned coal into gas, efficiency of gasification, efficiency of gas combustion;
- energy efficiency of gas combustion, effect on natural environment;
- cost of facilities and the profitability of gas production to power industry.

6. As regards gasification of coal into systemic gas:

- economic analysis of the introduction of gas in lieu of solid fuel burned with a low efficiency;
- classification of potential users of this gas (communal users).

7. Evaluation of technical-economic effects of the gasification of coal in world technologies with allowance for overall energy efficiency.

8. The national fuel-energy concept:

- industry;
- cities;
- countryside,

with allowance for: coal, coke, natural gas, coal gas, biogas, and electrical energy generated by coal-burning and nuclear power plants.

9. the concept of energy for the countryside:

- electrical energy + biogas + solid fuel + bottled gas industry (propane-butane), utilization of timber.

10. The need for additional development of rural electrification.

11. Facilities and equipment linked with all concepts.

12. Possibilities for securing and investing in the development of the fuel-energy complex.

Concluding Remarks

The authors are fully aware that various proposals and suggestions made in the present paper are debatable. On the other hand, the initiation of comprehensive and coordinated action to achieve current and long-range solutions of the nation's fuel-energy problems is not debatable.

The reconstruction of the extraction of hard coal has already been commenced. Parallel to this, it is indispensable to attack the problem of the internal coordination of the fuel-energy complex. Extensive development must be replaced with its intensive counterpart. The program for developing the fuel-energy complex should secure not just the country's existence but also its optimal socio-economic development under given conditions.

For now it is necessary to reverse the traditional reasoning that the demand for fuels and energy should be determined according to the postulated economic growth of the country. For now programming the nation's economic growth should be linked to the possibilities for obtaining fuels and energy and streamlining their utilization.

A major restriction on the development of the fuel-energy complex is the need to curtail investments during the 1980s in view of the critical economic situation. It can be expected that the percentile share of investment outlays on the needs of the fuel-energy complex in generated national income will range within 3.8-4.3 percent. This means that investments in that complex can range within 70-100 billion zlotys annually (in 1981 prices). In the event of a rapid improvement in the economic situation these possibilities may increase. This results in a situation resembling a vicious circle: meeting the growing demand for fuel and energy is a prerequisite for socio-economic development, but this cannot be optimally accomplished owing to the lack of funds for a proper development of the fuel-energy complex.

Hence also we place special emphasis on the need for solutions that substantially reduce the energy-intensiveness of the nationaleconomy, which will promote its indispensable growth within the framework of the available resources.

Viewed in this light, research and application work to reduce energy-intensiveness in existing or modernized technologies acquires special importance. At the same time, the need for systematic monitoring of world trends in new production technologies should be also borne in mind. This also concerns new solutions as regards the conversion and utilization of fuels and energy. This will protect us against losing contact with world advances in these fields.

The cost of the conservation of fuels and energy is less capital-intensive than the additional expansion of the fuel-energy complex to meet the growing demand for fuel and energy.

Imports of crude oil and natural gas will curtail the development of the fuel-energy complex. At the same time the deficit in the balance of payments as regards foreign trade in fossil energy sources will increase. Payments for imported crude oil, natural gas and, in the future, nuclear fuel will not be offset by revenues from exports of hard coal. Hence it will be necessary to develop for this purpose the exports of materials- and energy-saving products with a high degree of processing while at the same time restricting materials- and energy-intensive products.

This reorientation of the economy will be extremely difficult but it is indispensable. When the problem is properly grasped and all the responsible parties in practice, science and technology are actively committed to solving it, it will be correctly solved so as to benefit the country's development.

Energy Dilemma

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[Article by Aleksander Szpilewicz, secretary of Commission for Raw Material Resources under the "Poland 2000" Committee for Studies and Forecasts, Polish Academy of Sciences: "Energy Dilemma: Abundance or Poverty" under the Rubric "Development, Development--But What Kind?"]

[Text]/ Beginning with 1975 (the optimal year) the consumption of fuels and energy in Poland grew at a faster rate than national income in comparable prices. In 1975 that consumption, at the primary-energy level, amounted to 92.5 kg of standard fuel per 1,000 zlotys of net material product (according to the convention accepted within CEMA). In 1980 it was 10.3 percent higher, and in 1981, 16.4 percent higher than in the optimal year. As calculated per US\$1 of value of gross total product (according to the UN convention), domestic consumption of fuels and energy amounted to 1.27 kg of standard fuel; in 1980 this indicator rose to 1.40 kg and in 1981, to 1.48 kg./ [printed in boldface]

A comparison with selected European countries is unfavorable to us for two reasons. First, there is our much higher level of energy-intensiveness per US\$1 of gross total product (for the year 1978) as compared with 1.10 kg s.f. [standard fuel] in Hungary, 0.62 kg s.f. in the FRG, 0.64 kg s.f. in Austria and 0.58 kg s.f. in France. Secondly, there is the divergence from the trend of this indicator. Most member countries of the European Economic Community have responded flexibly to the rising cost of fuels and energy. During the 1974-1981 period total product in EEC countries increased by an average of 15 percent in comparable prices while primary energy consumption fell to the 1974 level. This has largely been achieved through the restructuring of industry and programs for energy conservation, supported by appropriate fiscal and credit policies.

In Poland the processes were reversed: the spiraling cost of fuels and energy (from domestic resources and imports) was not offset with an appropriate price policy, resources were sometimes allocated to ineffective investment programs and priority was given to tonnage figures instead of a credible input-output analysis. Tendencies toward extensive development became quite glaring. As measured by the yardstick of the optimal year, the net material product obtained in 1980 cost the Polish economy the consumption of additional primary energy equivalent to 18 million tons of s. f. and in 1981, 26 million.

Primary Energy from Domestic Resources

The extraction of fuels is an energy-intensive process. In the optimal year (1975) it was linked to the consumption of energy having a transaction worth of US\$4.5 per ton of s.f. In 1980 this indicator was US\$4.95/ton of s.f. and in 1981, US\$5.2/ton of s.f. The principal causative factors were and remain the worsening mining-geologic conditions of newly developed deposits.

The transportation of--chiefly solid--fuels also is an energy-intensive process. The conveyance of one ton of standard fuel by means of public transportation alone over a distance of 280 km--the national average--required the consumption

of energy with a transaction value of US\$1.72 in the optimal year 1975. In 1975 this indicator rose to US\$2.14 in comparable prices and in 1981, to US\$2.24 per ton of standard fuel. These figures pertain chiefly to rail and barge transit.

The extraction and transport of fuels also are materials-intensive processes. This concerns coal much more than hydrocarbon fuels. This entails extensive commitment of energy-intensive materials (steel for casing, nonferrous metals for cable and motors, rubber for conveyors, etc.) with a short service life and limited possibilities for recovery in form of scrap.

The extractive industry--especially fuel extraction--causes significant environmental damage. Typical damage to buildings and structures (effects of underground operation) is combined with loss of forested and arable land (effects of strip mining), blockage of areas by mine dumps, the contamination of water bodies by salts and suspensions, and disturbances to the watertable that are injurious to crops. The cost of restoring the ecological equilibrium has not previously been considered. But the upset equilibrium manifests itself more and more acutely in degradation of the environment and deterioration of living conditions.

Fuel extraction is a labor-intensive process. It entails a drain on--especially resourceful and devoted--manpower which is used for arduous and dangerous work that is relatively unproductive in terms of value per employee. Productivity measured by hard coal extraction per employee per year in Polish mines amounted to 505 tons in 1975. In 1981 productivity fell to 428 tons, i.e. to the level of the late 1960s. The optimal productivity per employee in Polish hard coal mines is half as high as in the mines of the FRG, about one-tenth as high as the mean productivity of coal mining in the United States and about 1/15th as high as in the mines of Australia and the Republic of South Africa.

Fuel extraction is highly capital-intensive. Investment outlays on fuel mining have so far been rising at a rate much higher than the growth rate of national income. In 1975, according to the Main Office of Statistics [GUS], they accounted for 12 percent of the total investment outlays in socialized industry. In 1980 their share was 22 percent. These are direct outlays and as such they do not provide the full picture considering that, by way of a feedback, mining investments have entailed extra-proportionally high outlays on the development of auxiliary industries and infrastructure, i.e. metallurgy, electrical engineering and transport. The rise in the capital-intensiveness of mining is obvious. The outlays per ton of extracted standard fuel amounted to 207 zlotys in the optimal year 1975 and 236 zlotys in 1980, in comparable prices (as of 1 January 1977). A substantial part of the investment outlays in fuel mining has been financed with loans obtained from payments area II ["capitalist" countries].

Mining is based on the depletion of nonrenewable resources. During the postwar period (until 1980 inclusively) the following quantities were extracted:

- hard coal: 4.2 billion tons (of which 1 billion was exported in natural form and in that of coke);
- brown coal: 0.7 billion tons (of which 0.4 billion from the Turoszow Deposit);
- crude oil: 10 million tons;
- high-methane gas: 70 billion cu m, plus 11 billion cu m of low-methane gas.

The process of the depletion of coal deposits in the Upper and Lower Silesian basins is now greatly advanced. operating reserves in active and newly built mines down to a depth of 1,000-1,100 m are estimated as sufficient for less than 60 years of further development, assuming an annual extraction of 190 million tons.

Brown coal reserves are modest. In terms of calorific value they are a fraction of the hard coal reserves. Closer survey of the newly opened Belchatow Deposit does not warrant optimism. The cost of the coal from that deposit will be presumably several times as high as that of the coal from the Turoszow Deposit, and in terms of calorific value, higher than the cost of Upper Silesian hard coal.

As regards crude oil and gas, their current extraction rate is higher than the growth rate of proved reserves. Premises for the discovery of new sizable deposits are absent. It is rather small deposit with short development cycles that will be discovered. The resource situation and the spiraling costs dictate a strategy of limited increase in the extraction of these domestic energy sources.

Brown coal extraction will double from 35 million tons in 1981 to about 70 million in 1990. The resulting increase will be 9 million tons in terms of standard fuel. This will be the only extracted fuel to increase in quantity.

Hard coal extraction will presumably stabilize at the 1980 level (193 million tons) provided, however, that more efficient extraction technologies are adopted.

The current level of extraction of crude oil and gas (0.3 million tons and 5 billion cu m in terms of high-methane gas, respectively) probably can be maintained. But a prerequisite for this is the conversion from a relatively dense network of shallow boreholes to a more rarefied network of more promising deep boreholes.

In sum, the domestic resources of primary energy in 1990 will total about 180 million tons of standard fuel. This will be a 5 percent higher level than that achieved in 1980 (171 million tons of s.f.). The structure of primary energy will be dominated by the following proportions in terms of calorific value: hard coal, 85 percent; brown coal, 10 percent; natural gas, 3.5 percent; crude oil, 0.3 percent; and water power, 0.2 percent.

The strategy of rising extraction targets, mandatory in the past, has to be suspended. The drain on material resources in favor of mining has proved excessive and cannot be maintained in the long run.

Balance of Trade in Fossil Fuel Sources

The balance of trade in fossil fuel sources, in comparable prices (US dollars in 1981) has been negative since 1975. In subsequent years this process further worsened. The ratio of exports of coal to imports of crude oil has deteriorated from nearly 1:1 to 1:2.5 in terms of thermal conversion.

The deficit in this trade (in prices as above) was equivalent to US\$1 billion in 1975. In 1980 it reached the level of US\$3 billion and in 1981, US\$3.6 billion. A sizable part of this deficit was due to Soviet shipments on credit.

The expectations of the importance of coal as an export commodity--particularly in terms of input-output analysis--proved to be exaggerated. Even so, coal exports represent a significant source of foreign-exchange revenues in trade with countries of payments area II. They are a must in view of the shortage of other attractive but more profitable goods for export. The balance of trade in fossil fuels in 1990 will probably be negative, with the deficit amounting to about 13 million tons of standard fuel in thermal conversion or about US\$4.7 billion in financial terms.

These figures do not include eventual imports of nuclear fuel and the cost of servicing the fuel cycle (regeneration, disposal of radioactive wastes). There is no reliable information in this respect. The question arises whether the condition of the economy--with indebtedness having to be repaid--will warrant a further increase in the burden by expenditures on fuel imports?

In addition, the terms of Soviet contracts for delivery of electric power and energy from the Khmel'nitskaya Nuclear Power Station have yet to be elucidated. Knowledge of these terms would serve to perform more specific estimates as regards the cost of the generation of nuclear energy compared with the cost of energy generation from conventional fuel.

Transition Losses in the Fuel Conversion System

The conversion of fuels to useful energy sources entails substantial losses. This concerns thermodynamic losses plus house consumption at links in the fuel-processing chain (public utility electric power stations and heat-generating plants, coking plants with gasworks, and crude oil refineries) along with transmission losses (power grids, heating networks, gas systems). The extent of transition losses is chiefly affected by: nature of primary fuels and degree of their thermo-electric processing in public-utility electric power stations and heat-generating plants.

The composition of primary fuels in Poland is unfavorable. The calorific share of solid fuels has stabilized at the level of 79 percent since 1975 (compared with 84 percent in 1970) and will not change during the current decade.

Abroad this share amounts to 30 percent on the world scale (e.g. in the USSR and the FRG; in France, 17 percent; in Austria, 12 percent; in Czechoslovakia, about 65 percent; and in the GDR about 70 percent).

The scope of thermo-electric conversion in the last decade has been expanding rapidly owing to the growing demand for electrical energy and the spread of central heating systems. The supply of electricity f.o.b the user electricity meters during the 1970-1980 period has increased by a factor of 1.87 and the supply of central heating, by a factor of 2.65. This resulted in a more than two-fold increase in the losses accompanying the conversion from the primary-energy level to final (utile) energy--from the equivalent of 20.5 million s.f. tons in 1970 to 45.9 million s.f. tons in 1980. This equals more than one-fourth of the latent heat of primary fuels. In countries with a high share of liquid fuels or a significant contribution of water power the conversion from primary to final energy entails smaller losses (on the average about 1/7 of the latent heat of primary fuels).

The processing of fuels--chiefly solid fuels--necessitates spending large quantities of materials on investment and repair purposes (steel, refractories, etc.). It is estimated that one-third of the 1,577,000 tons of rolled steel

products used in 1980 by socialized industry for repair purposes was allocated for the upkeep of the principal fuel-processing systems.

Fuel processing is capital-intensive. Direct outlays on public-utility power industry have been rising at a faster rate than the growth rate of national income. In 1975 they accounted for 7.3 percent of all investment outlays in socialized industry and in 1980, for 14 percent. The increasing capital-intensiveness of the power industry is obvious. The drain of resources for creating new power- and heat-generating capacities has curtailed the possibilities for the development of other branches of the economy (food, housing, consumer goods) and, chiefly, the measures to streamline energy utilization and restructure industry.

"The ideology of (electrical and thermal) megawatts" is still more followed in word than in deed as regards making the system more flexible, equalizing power consumption (organization of labor and work shifts), introducing a proper rate system and eliminating glaring waste.

The process of creating new capacities in the thermoelectric public-utility system must be markedly curtailed in favor of greater flexibility and certainty of the existing capacities. This is an indispensable prerequisite for restoring the equilibrium between the electricity market and the heating market (indispensable to private home building and agriculture).

The thermoelectric system of the public-utility industry is the principal "coal eater." Its (tonnage) share in the total consumption of hard coal by the national economy has risen from 29.4 percent in the optimal year (1979) [as published] to 36 percent in 1980.

The expectations to relieve these proportions by increasing the extraction of brown coal do not take into account the spiraling cost of that fuel and of its processing at the Belchatow-Szczercow Deposit. The cost of the electrical energy derived from that energy source may prove extremely high compared with outlays reducing the demand for it. It may be that the power-generating capacity to be installed there (4,320 MW) is too ambitious and may have to be achieved only through "outside" supplies of coal (new mining investments). Halting the development of the electricity- and heat-generating capacities of power industry is needed to, among other things, halt the escalating conversion losses throughout the fuel processing system.

The principal cause of the extensive rather than intensive power management is the considerable inertia of the system as regards supply (shortage of peak and sub-peak power) and consumption of power (prevalence of single work shifts in industry, disruptions in smoothness of operations, nonselectiveness of power intake and disconnections). This situation should prompt tighter load regulations (capacity development in pumped-storage units). It should at the same time be a warning signal when drafting the concept of the development of domestic nuclear power industry (nuclear reactors operate under a fixed load).

Scenario of Foreign Trade in Fuels

	1980		1985		1990	
	Actual Quan- tity	Value in US\$ billion	Quan- tity	Anticipated Value in US\$ billion	Quan- tity	Value in US\$ billion
Exports:						
Hard coal and coke (millions of tons)	33.0	2.08	30.0	1.89	30.0	1.89
Brown coal (millions of tons)	1.3	0.19	-	-	-	-
Liquid fuels (millions of tons)	1.5	0.37	0.5	0.12	0.5	0.12
Electrical energy (twh)	4.4	0.26	4.0	0.23	4.0	0.23
Total, equivalent millions of tons of standard fuel	31.8	2.90	28.2	2.25	28.2	2.25
Imports:						
Hard coal (millions of tons)	1.0	0.07	1.0	0.97	1.0	0.07
Crude oil and liquid fuels (millions of tons)	19.0	4.75	16.0	4.00	20.0	5.00
Natural gas (billions of cu m)	5.3	0.85	6.0	0.98	8.0	1.28
Electrical energy (twh)	4.1	0.23	8.0	0.48	10.0	0.60
Total, equivalent millions of tons of standard fuel	34.7	5.90	31.7	5.51	40.9	6.95
Balance of export-import trade in equivalent millions of tons of standard fuel	-2.9	-3.0	-3.5	-3.26	-12.7	-4.70

Macroproportions of Final-Energy Consumption

In the optimal year 1975 the Polish economy consumed final energy worth US\$13.8 billion in 1981 transaction prices. In 1980 this value rose to US\$16.7 billion (+21 percent) while at the same time the net material product increased 12.7 percent in fixed prices.

World Bank estimates and conversion tables indirectly indicate that the total gross product of the economy of the PRL grew from about US\$110 billion in 1975 to about US\$124 billion in 1980. By the same token the final energy consumed in 1975 accounted for 12.5 cents of every dollar of total gross product and in 1980, for 13.5 cents.

In 1981 total gross product steeply declined to approximately US\$108 billion (-13 percent). The transaction value of final energy consumed dropped to US\$15.3 billion (-8 percent). Thus final energy consumption rose in comparable prices to 14.2 cents per dollar of total gross product.

The macroproportions in the use of final energy have clearly changed in favor of "private consumption." This is a conditional term pertaining to consumption by households and all service subsectors (including small-scale industry, artisan trades, agriculture, and sea-going shipping). On the other hand, the share of "production" applications has decreased: this term refers to state industry and construction (exclusive of fuel mining) as well as to transport and mass transit.

In the crisis year 1981 private energy consumption was greater by one-third than in the optimal year 1975, while consumption by state industry fell below its 1975 level, as did consumption by public transportation.

Such a high growth rate of private energy consumption cannot be justified by demographic factors and the growing number of households (a 12.5 percent increase in inhabited dwellings between 1975 and 1981), nor by the spread of private car ownership (2.35 percent increase in the number of passenger cars). The public continues to waste cheap energy. Uncontrolled heat leakages are a fact of daily life. The public is still little educated about energy. The metering and regulation of consumption still exist in an embryo stage. It would be an oversimplification to blame chiefly the poor quality and inadequate heat insulation of postwar construction. A major factor has been the deterioration of old housing stock and the building of detached single-family houses in the countryside and smaller towns, especially in recent years. Energetic systemic and propaganda measures to put an end to the wasteful use of energy by this group of consumers are needed.

The energy proportions in the group of "production" applications remain unfavorable. The group of "heavy" industries with a low share of added value continues to consume more than two-thirds of all final energy.

By contrast, the developed capitalist countries with industries geared to exports of investment goods (e.g. the FRG) maintain a ratio of nearly 1:1 between the "heavy" and the "processing" industries as regards the industrial consumption of energy. The countries with industry geared to exports of consumer goods (France, Austria), in their turn, display reversed proportions in this respect as compared with the Polish economy (the ratio of the "heavy" to the "processing" group in these countries is 1:2). "Tonnage ideology" has hobbled the development of the domestic iron and steel industry. The ratios between prices obtained from exports to payments area II [capitalist countries] and those paid for imports from that area have worsened from 1:2 in the mid-1970s to 1:2.25 in the late 1970s. The past decade was marked by a major decline in the quality of metallurgical products. A major reason is the decline in occupational skills and technological discipline.

"Tonnage ideology" has also adversely affected the development of the chemical industry. The allocation of most of the resources to high-tonnage inorganic industry and the construction of new plants in lieu of the modernization of old ones has resulted in a low profitability and relative backwardness of most sub-sectors of that industry. It continues to be an industry condemned to rely on substantial producer imports from payments area II and lacking any explicit export specialization.

In the mineral industry the emphasis on heavy reinforced concrete structural elements has prompted a marked expansion of the cement industry--chiefly in the production of low-grade cements) at the expense of porous concretes, sintered aggregates and heat-insulating materials.

In state construction the large-panel system involving energy-intensive long-distance hauls of structural elements has been a negative factor. The incentive systems based on so-called processing have produced a similar effect.

In the group of processing industries the principal causes of excessive energy-intensiveness are: disruptions in material-technical supply (especially from payments area II); losses due to idling of equipment, the prevalence of a single work shift; poor coproduction ties and antiquated systems for the organization of labor.

Given the low utilization of productive capacities, energy is consumed to a greater extent for economic needs than for production needs proper. Many subsectors of the processing industries have received modern equipment. This concerns especially the subsectors of construction and road machinery, machine tools, precision instruments, cable, ball bearings, marine engines and automotive assemblies and components. Strong subsectors for the production of industrial boilers, high-capacity turbines, and power-plant and mine equipment have arisen. They could be made more export-oriented within a short period of time. The indispensable prerequisites for this include improving the quality of production in the metallurgical, plastics and rubber industries.

Restructuring the Economy: Priority Subsectors

The 1983-1985 period should bring about a definitive decision as regards the directions in which the Polish economy should be restructured so that the subsequent years would bring the expected and authentic turn to the better. The need to shift the proportions from outlays on increasing the supply of fuels and energy to other subsectors of the economy--including a more efficient energy utilization--has been documented and is not subject to doubt.

Similarly, the shift of macroproportions from outlays on the quantitative expansion of "heavy" industries (metallurgy, high-tonnage chemical industry, mineral industry) to the sphere of "processing" industries, along with emphasis on the quality of staple semifinished products (metallurgical products, plastics, construction materials) is not subject to doubt. The least effective iron and steel plants, cement plants and high-tonnage chemical plants (or their departments) will have to be permanently shut down.

There remains the most difficult question: which processing industries should be given priority? The selection must be based on not only energy-intensiveness but other criteria, such as materials-intensiveness, imports-intensiveness (especially as regards imports from payments area II), competitiveness on foreign markets and meshing of selected specialization to the level of occupational skills of the labor force.

Definite priority as "locomotives of progress" appears to be deserved by selected subsectors and groups of products of the electrical machinery industry. For example, consider the table below on the energy-intensiveness and materials-intensiveness of 23 subsectors of the domestic electrical machinery industry as of 1981.

Electromachinery Industry	Energy Consumed, in US\$ millio-		Total	Materials Consumed,	
	rectly			Rolled Products	Nonferrous Metals
Automotive	127.6	111.9	239.5	590.3	27.2
Shipbuilding	20.8	60.3	80.9	305.5	4.4
Railroad rolling stock	24.4	38.1	62.5	195.1	2.1
Tractor and agricultural machinery	53.9	80.8	134.7	410.3	5.5
Motors and aircraft engines	26.1	20.7	48.8	39.2	21.6
Heavy machinery and chemical equipment	30.8	26.4*	57.2	124.9	4.3
Construction and road machinery	70.0	42.3	112.3	214.9	3.0
Metal products	-40.4	221.0	261.4	828.0	9.7
Castings	34.9	13.9	48.8	47.3	7.5
Machine tools and hand tools	43.6	10.8	84.4**	50.5	0.8
Commercial and food-industry equipment	7.8	11.4	19.2	47.8	3.6
Air conditioning and venti- lation equipment	2.4	8.0	10.4	41.3	0.4
Textile machinery	9.0	2.5	11.5	10.8	0.7
Precision equipment	21.3	18.4	39.7	62.8	1.0
Optical and medical equipment	7.9	1.2	9.1	2.9	1.1
Electronic equipment	7.9	1.2	9.1	2.9	1.1
Automation and measuring apparatus	10.4	4.6	15.0	0.9	3.9
Household power appliances	35.7	25.1	60.8	83.9	13.8
Household appliance plants	1.2	2.8	4.0	12.8	0.7
Modernization and machinery industry plants	7.0	9.6	16.6	48.5	0.7
Electrical machinery and equipment	56.1	40.5	96.6	69.4	41.1
Lighting fixtures and electric- al installation equipment	18.5	9.0	27.5	49.2	8.0
Cable industry	12.5	83.8	96.3	1.7	124.7
Total	703.8	848.2	1,552.0	3,149.4	286.0

*NOTE: Indirect energy-intensiveness: rolled products, US\$188/ton; nonferrous products, US\$670/ton.

**[as published]

The selection of particular subsectors (groups of products) from among those presented in the table requires that additional criteria be considered (added value, export competitiveness, production cost, etc.). The problem is to quantify these criteria and fill the information gap. The selection of the electrical machinery industry is justified by: the strongly expanded iron and steel industry, the electromachinery structure that has been modernized by means of Western deliveries, and the relatively high level of occupational skills of the concerned labor force.

Good traditions and significant accomplishments are displayed by selected groups of products of "low-tonnage chemical industry" and particularly the pharmaceuticals subsector. In that subsector, energy-intensiveness per unit of added value is one-sixth of the average for chemical industry as a whole. The development of that subsector is also supported by the substantial value and modernity of the fixed assets invested in it as well as by the skills of its labor force.

The glassmaking and utile ceramics industry has a chance for development. The subsector with the abbreviated name VITROCER displays an energy-intensiveness that is only one-fourth of the average for the mineral industry as a whole, per unit of added value. It is based on good supplies in the form of quality sands for glassmaking and complementary raw materials.

In transport and public mass transit the priority of the continuing electrification of railroad lines is indisputable.

In urban mass transit, trolleybus traction as a partial substitute for bus traction deserves greater consideration.

In the development of heat sources for households and public utilities it is advisable to allot more resources for the development of small-scale local heating system based on water boilers of factory-installed design without the heavy and costly construction infrastructure.

If we are not energetic in solving the energy dilemma, I see the future as dark and cold.

1386

CSO: 2600/674

REFORM IMPACT ON MANUFACTURING, CONSTRUCTION INDUSTRIES SUMMARIZED

Warsaw ZYCIE GOSPODARCZE in Polish No 11, 13 Mar 83 p 8

[Article by Urszula Wojciechowska: "The Necessity of Tough Financing"]

[Text] In this article, I am presenting a summary of the results of studies conducted by a team of a dozen or so workers of the Institute of the National Economy [IGN]*. The main purpose of the studies was to examine the effect of the economic reform mechanisms on the results of the activity of industrial and construction enterprises in 1982.

Although the process of exerting an influence on the economic situation in the country by the reform has a long-term character, certain effects of the reform may be observed after a short period of time. This concerns to a greater extent the reform's mistakes rather than its successes. The positive effects of the reform, which can be observed within a short period of time, may depend on the formation of attitudes which favor efficiency and which are conducive to the restoration of equilibrium as well as on the formation of attitudes favoring innovation. However, in general, one has to wait rather a long time for the fruits of such enterprise reorientation.

That is why, we consider the attributing to the reform of certain positive, realistic phenomena, which occur in the economy in a short period of time after its introduction, as grossly simplistic. The case is different with mistakes of the reform. The observation of continuing anti-efficiency attitudes

* The names of the team members are as follows: Piotr Klimkiewicz, Joanna Kotowicz-Jawor, Wanda Mizielinska, Tadeusz Smuga, Jozef Sobota, Andrzej Szeworski, Ryszard Tragarz and Marek Zytniewski.

and the ease with which public income is raised in the sphere encompassed by the reform is a sign of the rather ineffective implementation of the reform. In such a case, there is no sense in waiting for its positive effects but instead start modifying its implementation. The study was conducted on a sample of 44 industrial and construction enterprises, which is relatively representative from the point of view of its [the sample] subsector structure. A considerable part of these enterprises was already known to us from our studies on the functioning of the reform during the first months of its introduction. The undertaken sample test of 44 enterprises is not very large which indicates caution in generalizing the study results. Two methods of study were used:

- 1) analysis of a series of economic relations (125 for each enterprise), which characterize the effects of undertaken activity, the situation of the workforce and the growth potential of the enterprises under study;
- 2) a survey conducted with employees of the enterprises (primarily management) on the subject of the facts and opinions concerning the functioning of the instrumentation of the reform and of organizational unit structures.

We conducted the studies toward the end of 1982. As a result, the numerical data analyzed are, in principle, concerned with three quarters of 1982. On the other hand, observations obtained by way of survey pertain, to a significant degree, to the entire year.

Against Decline

A number of positive phenomena may be observed in the attitudes and activities of the analyzed enterprises, primarily a tendency toward maintaining the level and continuity of production. This tendency manifests itself in concrete undertakings for the purpose of overcoming materials, import and employment barriers. The record of such undertakings was presented by a number of the surveyed enterprises.

However, this is not so much the result of the economic reform mechanisms (to be discussed later) as the conviction that a continuing, long-range drop in production constitutes a threat to the existence of the enterprise, even if it does not cause any financial difficulties at the present time.

No Financial Difficulties

Enterprises do not have financial difficulties in terms of providing for the needs of current production and improving the conditions of the workforce (wage increases and increased sociocultural expenditures). One receives the impression that the enterprises are proceeding with certain caution in raising wages and that they are not exploiting the financial possibilities which exist in this area. The favorable situation is the result of high profitability and ease of credit supply as well as (where where it is needed) of budgetary subsidy supply. In effect, little remains for enterprises from the economically managed profit because the budget takes the rest. However, this is not an indication of either a severe tax system in production or a "tight" financial situation of enterprises. The share of the total amount of taxes in total net production in 1982 came to 43.8 percent and is lower than in 1981 (45.0 percent). This indicates that enterprises took advantage--at least to the same degree as the budget--of the increase in profitability

which occurred in 1982 owing to price increases. There is no sign of financial "margins" [luz] in the division of profits; they may be found in the ease with which production costs are covered or, otherwise speaking, in the potential profits which could be achieved with interest in the maximizing of profits. At the present time, such interest does not exist as is evidenced by the fact that the tax system is concentrated on taxing profits and this by means of the progressive tax.

There is a substantial difference in the way in which enterprises assessed their financial situation during the initial months of ushering in the reform and at the end of 1982. In the beginning, the feeling of being threatened dominated; enterprises complained about the bank and attacked the income tax and FAZ [Vocational Activation Fund]. Currently, enterprises speak well of their bank relations (deficit enterprises claim: "We had problems until we obtained subsidies; everything is fine now") and express understanding toward tax liabilities. The effectiveness of positive incentives, which produce additional financial supply in the form of tax relief for increased production and exports and financial advantages for quality improvement, is highly doubtful under conditions of an abundance of financial means. The following serve as proof:

--a number of enterprises admit honestly that progress in the area of the level of production, exports and the quality of materials-intensiveness depends on the elimination of existing barriers and that in this situation, additional financial incentives will not be of much help; financial incentives associated with quality are generally treated with disregard (amounts which meant something a year ago, are ludicrous today);

--all central decisions made during the second half of 1982, (resolutions nos. 135, 182, and 186) increase funds for wages and yet, enterprises did not at all accept them with pleasure and continue to address a number of critical comments in their direction;

--the criteria for awarding bonuses, which have been adopted in the internal rules and regulations, have a specific character. In general, those criteria in whose direction external incentives are directed, are rarely found among them. For example, 15 of the polled enterprises received tax relief for exports but only 2 of them used this as a criterion for bonuses; considerable approval for providing bonuses has been written into the rules and regulations of enterprises which may be indicative of the fact that enterprises do not feel the economic pressure to implement specific tasks, which are important from an overall economic point of view, such as production growth including exports, materials economy and enrichment of the production structure. Instead, the regulations contain broadly-formulated bonus criteria, such as: the completion of tasks, efficient management, good work, etc.

Conclusion: The modification of the principles of the reform by introducing positive incentives into its implementation, which are connected to an additional influx of funds, is ineffective in the face of a favorable financial situation of enterprises. Reverse action should be taken: limiting the financial possibilities of enterprises and in this way forcing activity for production growth and the lowering of costs.

Wages and Effects

In the tested sample [enterprises], there was no dependence found between the situation of the workforce and the effects of enterprise management. The situation of the workforce was evaluated according to the level and growth rate of average wages and the level of sociocultural expenses per employee which turned out to be convergent with the average wage level.

The analysis of the distribution of effects obtained by enterprise groups, which are characterized by various levels of average wages, reveals that the average wages do not correspond to the effects. Approximately one-half of the effectiveness ratios examined is characterized by reverse distribution in relation to the distribution of average wages (the higher the average wage, the lower the effectiveness indexes); the second half of the effectiveness indexes does not reveal a correlation with the average wage level. The current range of the level of average wages is, in effect, the same as in 1981, although on a higher level, which once again confirms that the results obtained in 1982 (their differentiation between enterprises) did not have an effect on the situation of the workforce.

Conclusion: If, indeed, the situation of the workforce does not depend on the results obtained by an enterprise, which ought to be confirmed on a larger sample and in relation to the results for all of 1982, then changing this state of affairs should become the main task of further work on the modification of the reform mechanisms.

Income After Taxes

There is complete convergence between the structure of income after taxes (total net production minus the total sum of taxes) per employee and the situation of the workforce, i.e., between the level and the growth rate of average wages as well as of sociocultural expenses per employee. Thus, the goal of the enterprise is the income per employee after taxes.

Interest in and possibilities of maximizing this goal were significantly blunted in the 1982 system by comparison with the level achieved in 1981 since the growth of this index was the basis for progressive taxing. One part of the income per employee, in the form of average wages, was subject to withholding for the FAZ while the second part--profit per employee--for the income tax. The profitability of processing, which is the basis for the income tax, is a gage [miernik] which is similar to the profit per employee. Such a tax system significantly balanced out the growth rate of income per employee between enterprises.

This is the principal explanation for the previous observation that the present range of average wages is analogous to that from before the reform and is not connected to the effects of 1982.

Conclusion: In order to achieve a dependence between the workforce situation and the effects of management, it is necessary to change to the taxing of the income bulk which is not in conflict with the maximization of income per employee/ Transferring the tax burden from the average wage to the total bulk of remuneration represents a valid step. However, the same ought to be done with the tax on the second part of the income, i.e., profit and the principle of taxing the entire bulk of profit should be adopted. In this way, more differentiated, average wage increases therefore, wage increases connected to the effects may be achieved. These differentiated increases placed on the current range of average wages do not, at all, have to cause a greater variation between the new levels or average wages than is currently the case.

Financial Result

The analysis of various forms of the financial result as gages of the efficiency of management produced the following results:

- a) all forms of the financial result were, under 1982 conditions, a highly questionable measure of efficiency; they proved particularly inefficient as gages of the production growth rate;
- b) however, it would be possible to differentiate with great caution the evaluation of the degree of efficiency (or rather inefficiency) of the particular forms of the financial result in measuring the efficiency of management;

--relatively less mistakes are made in the evaluation of efficiency by using profitability measured in own costs as well as net production per employee;

--the profitability of processing and the financial result per employee appear to be of very little use as measures of efficiency (lack of correlation);

--income per employee following taxes, which is the most important form of financial result from the point of view of enterprise interests, gives a picture of the efficiency of management which is relatively the furthest removed from the true picture (the most falsified--reverse correlations from those desired).

Conclusion: In order for the financial result to become a gage and regulator of the efficiency of management, which is a condition for the effectiveness of the principle of self-financing, the following are necessary:

- a) the lowering of enterprise profitability by means of an appropriate tax system;
- b) modification of the tax system in such a way that would not break up the dependence between financial results and the income per employee after taxes.

Jump in Profitability

Our studies confirmed the generally-known fact that in 1982 Polish enterprises reached a huge, bounding increase in the level of profitability. At the threshold of the reform, a considerable segment of industrial enterprises and even a larger segment of construction enterprises showed a deficit. After a

year of the reform, an overwhelming majority of them are implementing high profitability. Although this profitability is in general very high, it is nonetheless, differentiated in the particular groups of enterprises as well as in terms of its [profitability] level and the size of the increase achieved from the starting-point.

The division of enterprises into three groups: market, supply-investment and export (the criterion for placement in a particular category was the predominance--over 50 percent--of a certain trend in sales) showed that the highest profitability is attained by the export group followed by supply-investment enterprises and with market producers in last place. We approached this observation, which was made on a relatively small test sample, with greater caution in case it would not be confirmed in another study involving 400 enterprises. This observation leads to the following assertions:

a) The reasons for such a broad range of profitability result from the varying sensitivity to prices of the consumers of these enterprise groups. Market producers encounter a sociopolitical barrier in regard to price increases and that is why their possibilities in this area are the most limited. Consumers of supply-capital goods still turned out to be insensitive to prices even under conditions of the reform. The severe shortage of raw and other materials and components causes the consumer to be willing to pay every price. However, producers of capital goods (manufacturers of machinery and equipment as well as industrial construction), who are complaining about the barrier of demand, also do not have problems in obtaining high prices. This shows that the implementation of the reform did not develop sensitivity to prices in consumers of capital goods despite the fact that today the market belongs to the consumer and that these consumers are complaining about the lack of personal funds and the tough crediting of capital.

However, foreign trade enterprises turned out to be the most liberal in price negotiations. This was influenced, to be sure, by the climate of "squeezing out" (begging out) exports at any cost as well as by PHZ [Foreign Trade Enterprises] interest in letting producers know how convenient it is to carry on business through them. However, it is strange why the apparatus of foreign trade did not encounter a barrier in the form of limited funds for surcharges?

b) The consequences of such high enterprise profitability are negative for microefficiency. Only low, unit profit forces production growth and the lowering of costs. High profitability makes these roads to the maximization of profits unattractive, especially when the progressive income tax, which takes away these hard earned increases, is functioning.

c) The macroeconomic consequences of such high profitability, which is differentiated in this way, for economic equilibrium and for proportion in the division of the national income are more complex. The most justified, in our economic situation, is the high profitability of market goods because this profitability signifies the secondary division of the nominal income of the public by means of prices which comprise a high standard of supplemental products intended for collective consumption and for development. The justification of the high profitability of raw and other materials and of components which are

in such short supply can also be acknowledged. However, the fact that manufacturers of capital goods reached a higher profitability than producers of market goods is not a desirable phenomenon from the point of view of economic equilibrium and the division of the national income. High profitability in that domain facilitates wage increases, thus giving rise to pressure for increased consumption. On the other hand, high prices for capital goods with a de facto limited demand, lower the share of capital in the national income, although in name only this may look different (the decline in the buying power of the capital zloty is more severe than that of the consumer zloty). Similarly, overly-high contract prices paid to exporters not only hurt the profitability of the export but also the possibility of increasing of this volume.

Conclusion: A condition for production growth and the lowering of costs is the reduction by proper tax implements of the high profitability, which is generally attained by construction and industrial enterprises. It is also necessary to create a mechanism which would stop the further growth of prices and profitability of capital and exported goods.

"Disarmed Implementation"

In the area of foreign trade, a superficially strong interest in exports was created, based on the easy influx of large funds at the time exports are implemented. This was achieved by high contract prices which guarantee a generally higher profitability of exports than of sales for the needs of the country (with higher profitability of exports to the first payments area than to the second payments area. This trend was strengthened by tax reliefs (Resolution No 182), which not only do not correspond to the profitability of exports by reveal, as a result of the structure of the reliefs, enormous differentiation in the particular enterprises in relation to the level of profits to be divided. The ease in obtaining large sums of funds is not, at all, synonymous, as was already indicated, with effective incentives which is attested to by the insignificant bonuses for exports. Interest in foreign-exchange allowances, which represents a potentially strong incentive, was significantly weakened by the possibility of bidding for the allocation of foreign-exchange. Producers also lost interest in the obtainment of licenses for the independent carrying on of foreign trade. This interest was greater during the initial months of ushering in the reform (the first phase of our studies) than currently. Thus, gradually the erosion of the implementation of the reform progressed in the area of foreign trade and it is difficult to resist the feeling that this process was in line with the primary goal of maintaining a monopoly of the foreign trade apparatus. A majority of the solutions used served this goal:

--making producers subordinate to PHZ in the process of liberally setting contract prices,

--the dominance of foreign-exchange allocations over foreign-exchange self-financing,

--resignation from the concept of selling foreign-exchange at a rate of balance in a certain area,

--the creation of trade partnerships in which PHZ retain their dominance.

Conclusion: The implementation of the reform in the area of foreign trade has been "disarmed" and requires urgent modification.

Developmental Situation

The following traits characterize the developmental situation of enterprises:

a) severe limitation of own capital investment activity which not only impedes development but causes the depreciation of assets,

b) the general complaints of enterprises in regard to the overly meager supply of funds for capital investment purposes due to the limitation of own funds as well as due to the difficult obtainment of credit for investments; the credibility of these complaints gives rise to certain doubts in the face of the following observations:

--capital investments are the only area for which enterprises lack funds which is odd in the face of the general abundance of funds and the complete freedom in their distribution;

--enterprises drew up their capital investment plans extremely carefully;

--despite complaints about a shortage of funds, enterprises did not come out with proposals for the granting of capital investment credit;

--expenses for repairs are higher than expenses from the development fund; this source of financing is tax free and noncompetitive with workforce consumption;

--the share of an enterprise's own working capital funds does not exceed the bank required minimum of 30 percent which would also indicate the lack of inclination on the part of enterprises to commit their own funds for developmental purposes and also the overly low price of working capital credits.

c) difficulties encountered by investors in relations with construction-assembly enterprises (not adhering to contracts, high prices); this fact is confirmed bilaterally: investors complain about contractors while in turn contractors complain about the investors excessive demands. This would indicate that such considerable limiting of the capital investment demand did not influence the improvement of management in the construction industry.

Conclusion: The threat of the decapitalization of assets and the excessive, it would appear, limiting of the enterprises' tendency to invest would indicate the need for more considerable external intervention (for example in the form of bank credit) in the processes of restitution and modernization of enterprise

assets (selective, controlled decapitalization). With such an assumption, the purposefulness of leaving enterprises the entire amount of amortization starting next year (to be enacted into law) is questionable, especially under conditions of its considerable increase as a result of the revaluation of fixed assets.

It would appear from our studies that the till now existing implementation of the reform has not been successful in creating economic pressure for the improvement of efficiency in management. In addition, it does not appear that the modifications adopted for 1983 can constitute a turnaround in this direction. And yet, a turnaround in the direction of, so-called, "tough financing" is necessary if the reform is to really be a way out of the crisis. Only then will the attainment of equilibrium be possible through an increase in supply and not through an increase in prices. The road to equilibrium through the supply of goods is a road through efficient management. The society of consumers, which does not want price increases, must reconcile itself with the tough obligation of efficient management as a society of--producers.

9853

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COLLABORATION WITH JAPANESE COMPANY IN USSR

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 8 Apr 83 p 3

[Article by (TK): "INA and Mitsubishi to Collaborate"]

[Text] Under Construction in USSR

INA-Commerce, INA-Projekt and the leading Japanese company, Mitsubishi signed a joint agreement to collaborate on the USSR market. In accordance with this agreement, the Yugoslav work organizations are responsible for building the entire chemical complex where, besides the production of acrylic acid and acrylic esters, they will manufacture finished products processed from the basic raw materials. The Japanese firm will grant the license and deliver part of the equipment.

This entire Soviet Union project, worth 150 million dollars, was entrusted to INA-Projekt, Zagreb. This arrangement is the first in which INA joins in the export of complete machine production in the petroleum, chemical and petrochemical industry. We have learned that the above project was recently expanded to include the building of installations for producing polyethylene wrapping material based on the technology of INA-OKI [Petroleum Industry, Zagreb--Organic Chemical Industry]. In this venture are also included the Zagreb-based organizations of Astra and Karbon.

12361

CSO: 2800/249

ECONOMIC RELATIONS WITH NIGERIA EXPLORED

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 1 Apr 83 p 3

[Article by Anda Petrovic: "More Courageous in Business In Spite of Difficulties"]

[Text] Economic Relationships Between Yugoslavia and Nigeria

Our associated labor organizations are becoming aware of the fact that in Nigeria no business deals can be expected outside the mixed enterprise system. Many firms are expecting to make a decision on their bids; others obtained contracts but projects are on hold.

Nigeria, the most populated and most extensive country south of the Sahara Desert, is attracting the economy of Yugoslavia as well as that of the other countries. Having become one of the world's largest producers and exporters of petroleum, it embarked on an extensive and ambitious program of economic and social development, based on large petroleum exports at high prices. It was already obvious last year that such schemes cannot be realized in a foreseeable time period, and that the expected production of 1.3 million barrels of oil per day, most of which would be exports, has to be reduced by as much as 200,000 barrels per day, the amount that was being produced in February of this year. The price per barrel of oil fell from \$35.50 to \$30 and \$28, depending on the quality of oil. Nigeria's foreign exchange reserves decreased by one tenth while the debts incurred from investments have burdened the unsettled economy of this developing nation. These developments induced Nigeria to turn to foreign investors in order to bridge the gap between planned construction and the decrease of domestic resources with which to finance these projects.

Restrictions in Carrying Out Development Programs and Imports of Goods

It is clear, therefore, why last year Nigeria started collaborating more with the Western countries from which it could obtain investment resources. Nigeria's economic ties with the West have always been strong. This can be seen from the statistics showing the total exchange volume between 1975-1981.

(in billion dollars)

<u>Year</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Export	7,775	10,097	11,780	10,538	17,874	26,841	19,770
Import	6,041	8,243	11,095	12,844	10,211	16,688	18,776

Nigeria's Participation in Total Foreign Exchange in 1981

	West	Socialist Countries of Eastern Europe	Yugoslavia
Export	15,731	233	98.4 or 0.45%
Import	15,443	32	36.8 or 0.20%

The total volume of exchange of goods between Yugoslavia and Nigeria in 1981 was 121.2 million dollars and last year only 27.6 million. Of that, according to the Institute of Foreign Trade, our export was 16.7 and import 10.9 million dollars. Statistics for January of 1983 indicate that the value of exports amounted to 2.3 million dollars while import was non-existent.

Exchange of Goods Yugoslavia-Nigeria Between 1978-1982

(in million dollars)

<u>Year</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	January <u>1983</u>
Export	18.3	76.7	106.4	36.8	26.7	2.36
Import	33.6	110.4	187.3	84.4	10.9	--
Total	51.9	187.1	293.7	121.2	27.6	2.36

Last year's foreign exchange inflow, which includes exported goods and services plus workers' remittances, was approximately 23.5 million dollars. In that same time Yugoslavia's exports were less than half as much as in 1981, while imports were about eight times less. The decrease of trade for 1982 can be seen from the fact that the expected volume of exports was 94.2 million dollars

and imports 113 million dollars. The reason for a marked decrease in imports, and therefore also exports, was the impossibility of our country to absorb the planned amounts of oil.

Yugoslav Business People Hope for Better Cooperation

Last year Yugoslav exports did not include the following large items from previous years: ships, equipment and fertilizers. Generators and medicines were exported, while the balance of revenue was earned from shipping services. Our associated labor organizations, acting through their section of the PKJ [Yugoslav Economic Chamber], through groups, through the ZPP (Joint Economic Representation) in Lagos, and individually, are attempting to return to the earlier level of trade, aware of the fact that even it has not been the highest. They feel the reason for the decline in trade is not only objective, but more subjective.

In December of 1982 in Lagos, there was a meeting of the ZPP where the work was evaluated and a program for 1983 established. The goal of the ZPP is to revive cooperation between the two countries, to at least double the volume of commodity trade in 1983, and to work systematically on obtaining new, large and small business deals (capital investment jobs and the delivery of various small products needed on the Nigerian market) especially through commodity warehouses which have proven successful.

It is known that according to Nigerian laws, the foreigners who can count on doing business there are only those who have established mixed enterprises and who have employed some Nigerians in the production process. Some of our organizations are hesitating on this, they would rather do it individually, which is difficult and costly because there is competition from large foreign firms and countries. Recommendations from the ZPP meeting are being taken more seriously this time, and the stimulus to create mixed enterprises is coming from firms which have worked on this for a year or two and which expect business. It is no wonder that Energoprojekt is so successful in that country: its mixed enterprise in Nigeria is NECCO. It did about \$88 million worth of construction work in 1982 despite all restrictions and delays, and this year it should do over 80 million dollars worth.

Many Offers--Solutions Expected

The mixed enterprises (Galenika, Progres, Jugobrod, Elektromontaza, INA, and the Dom-Electron-Hidrotehnika-Geosonda group), have noted initial results which can be attributed to their smooth operation and successful management. Besides these, at the end of 1982 there were six other companies in Nigeria with unclear status which, we believe, is now becoming clear. There are also three agencies: Astra, of Zagreb, which is the most successful exporter; Splosna plovidba, of Piran and the Bank of Ljubljana. Business people expect more help from this bank. They would like to establish relations with the largest Nigerian banks in order to avoid having to deal with third banks.

Objective difficulties have also arisen in cooperation. Energoprojekt was given responsibility to erect the Festival Hall building in the new capitol

city of Abudz, but the project has been postponed; Partizanski-put was to build a section of a large rail line, a job worth about 400 million dollars, but the project has been stopped. However there are reports that it will be activated. A number of other projects have been postponed or slowed-down; the following Yugoslav firms, in addition to those named above, have competed for these: INA with the Split Shipyard and Jadranbrod for ships, Vojvodina-put and Srbija-put Emona, IMT, Geotehnika, Agro-industrija, Invest-import, HME-ZAD Zalec, Institute for Corn in Zemun, and "Progres" in Belgrade. IMOS in Ljubljana received a concession for a quarry project and Meblo expects that in the second half of the year it will start a plant which will produce furniture, together with a local partner. Offers have also been made by Amortizeri, in Pristina and the Energo-invest, Energoprojekt, MINEL, Elektromontaza, and INGRA group in the field of energy.

Yugoslav business people are expecting a revival in cooperation with Nigeria. It is expected that this year economic conditions in Nigeria will begin to stabilize, and we must follow and take advantage of the opportunities that will present themselves.

12361

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DECLINING INVESTMENTS IN MACEDONIA

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 6 Apr 83 p 8

[Article by A.M.V.: "Priority Given to Capital Construction"]

[Text] Investments in Macedonia

This year the investment resources in this republic will exceed 8 billion dinars, mainly for the completion of more important projects.

The rate of investments in Macedonia decreased by 22 percent last year compared to 1981 and this trend will continue to the end of the medium-term period. This decline is in keeping with the republic's current social orientation. Based on the evaluation of the Economic Bank-Associated Bank of Skoplje, 8.9 billion dinars were planned for only the most necessary investments in 1983. These funds will first be directed toward the completion of important projects. It is above all a question of overruns in capital investment construction to which priority is given, such as: the building of the mining-energy combine Bitola, the ferro-nickel complex FENI in Kavadarci and the petroleum refinery in Skoplje.

A good part of the funds is also needed to activate the projects which the International Bank helps finance. A part of these resources will be used to begin building the Bitola III [Thermal Electric] Power Plant, to explore new coal reserves in the Bitola basin, to make new investments in the Skoplje ironworks and the Bucim copper mine where new and richer deposits of this raw material are being explored.

One's Own Share and Limitations

With respect to the considerable reduction of funds for building new capacities in the current medium-term period, it can be said that further development of the Republic and especially its undeveloped areas is seriously in question. A particular problem stems from the fact that the resources from the Fund for the Undeveloped are not sufficiently utilized. The Republic's Fund for Faster Development of Underdeveloped Areas will have 2.2 billion dinars at its disposal this year. But, in order for these areas to use this fund, they must first insure their own contribution to the financing. That limits the realization of some already accepted programs as well as some new important

projects. The best way to utilize in timely fashion the resources from the Republic's fund would be through self-management agreements on pooling labor and resources of organizations from the undeveloped opstinas with those of organizations of associated labor from the developed areas within and outside the Republic. In viewing the investments of associated labor in Macedonia, one must first mention the important project of the Skoplje ironworks, where a study is being made for the introduction of lignite technology in the manufacture of pig iron. This very important substitute ensures a marked saving in energy by exchanging imported energy sources for domestic ones. The estimated value of this project is around 10 billion dinars and the study is being conducted by a firm from California. As an example of wider pooling of labor and resources one must mention the Elektromontaza work organizations in Ohrid, which is building about 10 electrical equipment plants in several undeveloped opstinas in Macedonia. One of these is the steel-mesh transmission-line factory in Kicevo in which 200 million dinars are being invested. Soon this plant will employ 170 workers who will process 17,000 tons of steel per year. It will manufacture about 10,000 tons of special long-distance cables, one third of which are destined for foreign markets. The value of the estimated yearly output of this new plant is 700 million dinars.

Significant Export Items

Another example of self-management linking on the basis of income is the Hartija cellulose and paper industry in Kocani, which, by reconstructing and modernizing its production plant, will increase its yearly output from the present 14,000 to 60,000 tons in 1985. The total investment amounts to 2 billion dinars, 640 million of which was pooled from a large number of printing plants and businesses from around the country. Existing data shows that this year, certain well known organizations of associated labor from the Republic will export over 255 million dollars worth of goods and services to foreign markets. The chief among these is the Mavrovo Construction Work Organization in Skoplje which will carry out 132 million dollars worth of construction work in foreign countries this year. Among its most important projects will be the building of a 23 million dollar power station at Tabris in Iran. The time limit for completion of this project is 28 months. Mavrovo's other foreign projects include construction of a hotel complex in the Soviet Union, apartment buildings in Misurata, plus some industrial projects in Libya and in the Federal Republic of Germany. As a result of rising purchase prices, a large number of private farmers have returned to tobacco farming in Macedonia. And because of this, the aim of the Jugotutun SOUR [complex organization of associated labor] is the increased export of tobacco. This year's export goal is 17,755 tons of tobacco and tobacco products valued at 70 million dollars, about 71.5 percent of which will be in the hard-currency market.

Another important export item is reported by the Teteks Combine of Tetovo, which will export approximately 29 million dollars worth of goods, 22 million dollars of which will be [paid for] in hard currency. The agreements for such exports have already been made with partners from U.S., Sweden, France, Great Britain, Algeria, Iraq and others. Also worth noting are export initiatives in Egypt and Iraq by Elektromontaza in Ohrid. Electrical equipment

equipment such as transformer stations, transformers, and other items worth 2 million dollars, are to be delivered to buyers in Egypt.

Alumina, an aluminum forms plant in Skoplje, has secured a 4 million dollar contract to participate in the construction of a university center in the capital of Jordan, for which there was formidable international competition. Also, in Lebanon, near Beirut, the Geological Institute of Skoplje will conduct a study of the ground structure on which a dam will be built. The value of these projects is one million dollars, which marks the second time this institute has earned foreign exchange in this country. Last year, similar research which lasted 6 months, realized another million dollars. There is also the Metalac steel construction industry in Prilep, which has agreed to deliver 3,000 tons of construction parts to the Soviet Union, Burma and Vietnam; 50 percent of the production of this industry will be sold to foreign markets.

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